People & the Planet

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Haiti's painful anniversary

Partners for change

People & the Planet **is a joint publication of the United Nations Population Fund, the World Conservation Union and the International Planned Parenthood Federation. It is published by IPPF in association with a wide range of international organizations which have an interest in various aspects of population, environment and development.**

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Cover: *Haitian farmers from deforested land try to build themselves a home in a shanty-town near the capital, Port-au-Prince. See page 20.*

■ *The next issue of* **People & the Planet** *will explore the criticism of population policies by some women's groups, and investigate the priority need for female education.*

People & the Planet

Contents

4 **Newsfile**

The world after UNCED 1: Nafis Sadik
6 A new development agenda
The world after UNCED 2: Mahbub ul Haq
8 Four bridges to cross

Don Hinrichsen
10 Egypt at the crossroads
Wagdi Riad
12 Women provide hope

Francisco di Blasi
20 What hope for Haiti?

Winthrop P. Carty
28 World Bank challenge
Gadfly: Norman Myers
30 Pie-in-the-sky?
Films: Jenny Richards
31 Opening the can of worms

34 News from our Associates

Books
36 Paul Harrison on *How Much Is Enough?*

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Planet 21

We are pleased to inform our readers that donor funding has been secured to continue the publication of *People & the Planet* beyond 1992. This will enable the editors to plan ahead for the next three years and to expand our outreach, our reporting capacity and our links with our sponsors and associates.

To develop this project an independent, non-profit, publishing company is being set up. Entitled Planet 21, this will not only publish the magazine but seek other channels of communication to promote the message of sustainable development.

Rethinking development

The intention of this issue of *People & the Planet* was not only to look ahead at the world after UNCED, but by examining two population/environment 'hotspots' to show how the healing process can be pursued. In the event, the two examples chosen – Egypt and Haiti – show more about the complexity of the problems than about solutions.

Egypt, for example, has attempted to develop both population and environmental policies, but has largely isolated one from the other. The need, according to Sjaak Bavelaar, UNFPA country director, is to create "an integrated development plan" which encompasses both issues in the context of national resource management. It is a view echoed in some respects by Dr Mahbub ul Haq who calls in page 8 for developing nations "to focus on their own agenda for sustainable human development." This would, he says, require a basic restructuring of their development priorities as well as international support.

The need for integrated, sustainable development planning is increasingly exercising international development agencies such as IUCN which pioneered the idea of National Conservation Strategies as a natural outcome of its World Conservation Strategy. Many other initiatives have followed, such as those developed by the UN Sudano-Sahelian Office (UNSO), or through the World Bank's National Environment Action Plans, the FAO's Tropical Forest Actions Plans and, more recently, the UNDP's Capacity 21 Programme, arising out of Agenda 21.

While all these efforts to promote sustainable strategic planning have been helpful, they have in some cases been carried out in isolation from national economic development plans. It is now being understood that much more recognition has to be given to existing national plans and how these systems can be enriched. It is also clear that the experience gained in strategic planning needs to be examined to see what lessons it teaches. Hopefully, new ways will be found to help developing countries, in particular, to integrate their new strategies and priorities into traditional development planning systems.

There are some positive examples of such initiatives. In Nepal, the National Conservation Strategy has been directly integrated into the five-year development plan. In Ethiopia, the National Conservation Strategy process has incorporated the work of UNSO on desertification and FAO on forestry and its secretariat is working with the World Bank's National Environment Action Plan to marry the Strategy with the Public Investment Portfolio. In Uganda, the National Environment Plan is providing the umbrella for collaboration with other outside agencies. There is clearly a huge way to go in rethinking the national planning process both in the developed and developing world, so that population, environment and resource issues are fully taken on board in creating sustainable economic and human development policies. But it is a hopeful sign that agencies such as the IUCN, IIED and the World Resources Institute are beginning to join forces to consider these questions. It is a subject to which *People & the Planet* will return.

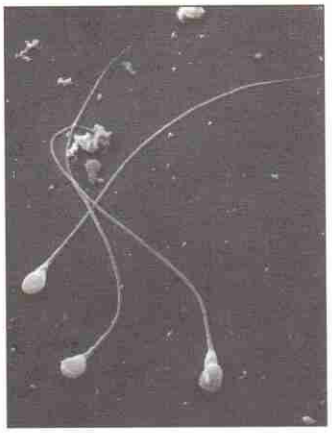
John Rowley

NEWS FILE

Sperm quality declining

In recent decades there has been a serious, and worldwide, deterioration in sperm concentration and sperm count, according to a recent study that involved a literature search of scientific journals going back over 50 years.

Dr Niels Skakkebaek, of Denmark's Rigshospitalet in Copenhagen, looked at studies of semen quality which added up to screenings of nearly



15,000 healthy men from all parts of the world. He found that mean sperm density of human semen had fallen from 113 million/ml in 1940 to 66 million/ml in 1990, and the mean seminal volume per ejaculate had dropped from 3.40 ml to 2.75 ml – a worrying change over what is a relatively short period, and a trend that could, ultimately, threaten human existence.

Scientists think deteriorating environmental conditions are likely to have played a major role in the decline in sperm concentration and in the accompanying increase in testicular abnormalities. Environmental factors are more likely to be responsible than genetic factors, given the time span, they say. There has been increasing pollution, irradiation and stress over the last two decades, alongside declining sperm quality in the general male population, according to Dr Alex Vermeulen.

A large number of environmental factors, including disease and malnutrition as well as smoking, alcohol, drug abuse and occupational noxious agents like heavy metals and pesticides, may all influence sperm production and quality, as they may also influence age at puberty and menopause and premature ovarian failure.

Health impact of cooking pollution

Traditional cooking stoves that use wood, dried animal dung or crop residues as fuel lead to high levels of indoor smoke pollution which is associated with acute respiratory infections – estimated to kill about 4.3 million children worldwide each year, according to Kirk Smith of the East-West Center based in Hawaii. He is part of a World Health Organization team that will explore how respiratory infections can be reduced by cutting smoke through improvements to stoves, fuel or ventilation.

Recent studies in Nepal, Gambia and Zimbabwe have found that children exposed to smoke from wood-burning cooking stoves have two to six times the risk of contracting serious respiratory infections compared with children in nearby households using cleaner fuels, according to Smith. More than half the world's households are rural huts, where women spend several hours each day preparing food on cooking stoves using biomass fuels, which can cause 25 times more polluting particles than the recommended safe level.

More efficient stove design and ventilation can reduce indoor pollution by around two-thirds, says Smith, but problems in making the stoves affordable and getting people to change their habits have prevented their spread. In the 1980s China, where there are more than 250 million homes using biomass fuels, introduced 120 million stoves with improved combustion, and two- thirds are still in use. India, however, has managed only a 50 per cent permanent switch to cleaner stoves. However, the long- term answer, according to Smith, is the use of less-polluting fuels such as kerosene and liquefied gas.

Rainforest experiment

The first phase of the Iwokrama Rainforest Programme in Guyana is now set to go ahead with the recent release of $3 million from the 'Green Fund' – the Global Environmental Facility set up jointly by the UN Development Programme (UNDP), the World Bank and the UN Environment Programme (UNEP). This makes a total of $4.5 million available for the initial phase.

The scheme was first conceived in 1989 when, just before the Commonwealth summit in Malaysia, President Desmond Hoyte of Guyana offered 360,000 hectares of virgin rainforest (2 per cent of Guyana's total rainforest) for an experimental project in sustainable tropical forestry.

An expert group, chaired by Dr M.S. Swaminathan (who is now chairing the interim board of trustees), then began work on developing ideas for the Commonwealth-Guyana Rainforest Programme. By mid-1990 the group had made some firm proposals for the beautiful stretch of Amazonian forest, which

includes rivers, animals, flowering trees and the Iwokrama mountains after which the project is now named.

One part will remain a wilderness preserve, left in its pristine state for observation of biological diversity, while a further site will be maintained and managed to yield benefits to Guyana on an ecologically sustainable basis. This will be done in partnership with the local Amerindian population, who will also act as forest rangers and tree identifiers in the wilderness preserve.

There will be an international centre for research and training in sustainable tropical forestry and a communications centre to promote understanding of the environment. The research centre's programmes will include investigating how to extract timber without damaging the rest of the forest, prospects for exploiting non-timber, value-added forest products such as pharmaceuticals, and eco-tourism. There will be studies of the relationship between tropical forests and the climate and water environment, and the ecological knowledge held by the Amerindians will be recorded as well as their farming and some of their social practices.

The interim phase of the project is expected to last two years, during which more detailed surveys will be undertaken, premises established and scientific co-operation obtained. The international centre should be in operation by 1994, when 24 scientific staff, with links with scientific and forestry institutions around the world, will be based at the University of Guyana.

Later marriage, later births

Some African countries are now experiencing a rapid rise in the age at marriage and at first birth, according to a recent World Bank publication*. Comparing data from the World Fertility Survey and from recent Demographic and Health Surveys (DHS), the author is able to chart changes in these measures and the relative influence they have on fertility decline.

In North Africa there has been a steady increase in the age at first marriage for several decades, and an increase in contraceptive prevalence rates. However, in Sudan the fall in the total fertility rate six to five children per woman is mainly the result of rises of five to six years in the age women marry and first give birth.

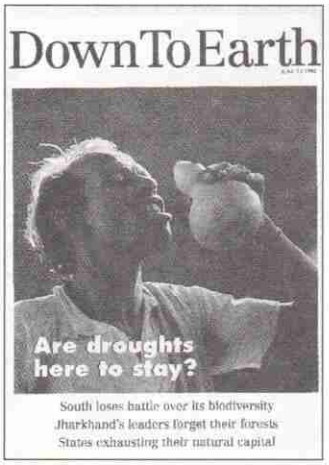
The picture for sub-Saharan Africa is mixed, with countries such as Mali, Liberia, Côte d'Ivoire, Lesotho and Cameroon showing little sign of later marriage. However, in others – including Kenya, Mauritania, Nigeria, Senegal, Togo, Uganda and Zimbabwe – there are signs of such a trend, and in Nigeria and Senegal this is responsible for the recent declines in fertility revealed by their DHS. One explanation for this is the increasing, though still low, proportion of women in Africa with secondary education. There have been dramatic falls in the proportion of women with no education, but it is secondary education which seems to make the most difference to the age of marriage and first birth, as well as changing women's fertility intentions and practice of contraception.

*Charles F. Westoff, *Age at Marriage, Age at First Birth, and Fertility in Africa.* World Bank Technical Paper Number 169.

Down to Earth launched

Anil Agarwal reports on the launch of a new magazine by the New Delhi-based Centre for Science and Environment, of which he is the Director.

Down to Earth was launched in May. A fortnightly news magazine, it


DownToEarth
Are droughts here to stay?
South loses battle over its biodiversity
Jharkhand's leaders forget their forests
States exhausting their natural capital

sets out to provide information in the fields of environment, science and development, both from India and the rest of the world.

Information is a major determinant in the pursuit of sustainable and equitable development. As part of the Third World, we need to develop our own sources of knowledge and *Down to Earth* is a part of that effort.

Environmental degradation is, of course, a very important issue in a country where vast numbers of people don't have access to even clean drinking water. But while rich countries are interested in the environment because they want to safeguard the future, the poor in the Third World are interested in the environment to secure the present. Evolving an alternative vision of how to manage natural resources in a fair and sustainable manner is therefore of vital importance. We hope the magazine will contribute to a clearer understanding of these issues through consistent reportage from various regions of a country that is both large and complex.

On the issue of population, we believe there are important lessons to be learnt from states like Kerala and Tamil Nadu where a significant improvement in the health care of children and in the health and literacy status of women have led to substantial falls in the birth rate. Reporting on the welfare status of various communities in India is, thus, an important function of *Down to Earth* news-gathering activities.

World Bank under the microscope

The World Bank's involvement in population programmes over the last 25 years has recently been reviewed by the Bank's Operations Evaluation Department; the conclusions are published in *Population and the World Bank: Implications from Eight Case Studies.*

After a slow, uneven and sometimes faulty start, the report says, the World Bank in general has become progressively more effective in the population field. On the plus side, the evaluators feel that the Bank's current methods of operating need only some shifts in emphasis – rather than radical changes – to achieve the desired demographic changes implicit in Bank policy. On the minus side, the Bank could have done and achieved more than it has done to date, the evaluators say.

The eight countries considered were Senegal and Kenya in Africa, Bangladesh, India and Indonesia in Asia, and Brazil, Colombia and Mexico in Latin America. All have seen some decline in fertility rates over the period, but the range is wide, with Senegal experiencing a marginal drop, and the three Latin American countries, India and Indonesia being more than halfway from their peak level of fertility to replacement level. The impact of the Bank is assessed for each country.

The evaluators point out that even in poor countries with little social and economic progress, fertility decline can be triggered by a family planning programme centred on the provision of contraceptive services and information. It will proceed more rapidly if it includes a strong outreach programme and provides high-quality services based on clients' perceptions of needs. This requires good field supervision, good training and good motivation, which is hard to achieve in poor rural areas. However, they say that there is little evidence that even the best-run of such programmes can do much more than neet the needs of those who are already predisposed to accept family planning. In all the eight casestudies, even if all such persons were enrolled in a family planning programme, or if whole programmes achieved the same contraceptive prevalence rates as their highest-achieving parts, nowhere would fertility drop to near replacement levels.

In the absence of strong social and economic change, there is a need for interventions other than those on the supply side if fertility is to drop nearer towards the 2 children per woman level. Although the Bank was active in promoting development, if it had encouraged measures to try to change the benefits and costs of large families it might have accomplished far more, the report says.

The evaluators conclude that, while most programmes could usefully have absorbed some extra funding, if the Bank had put more money into programmes, it would not have made much difference to the demographic outcome. Now, however, there is a need for more funds in order to expand the Bank's activities to other countries.

Between 1988 and 1992, World Bank yearly commitments for population averaged $166 million – up from $50 million during the previous five years, according to the Bank's Annual Report 1992. Expansion has been particularly rapid in Africa. ■

■ See also page 29.

A new development agenda

by Nafis Sadik

From the time that the World Commission on Environment and Development (the Brundtland Commission) reported to the end of the Earth Summit was a little under five years. The results of the process may not have matched up to the highest hopes of the organizers of the Conference – but that such wide- ranging agreement was reached on such a broad variety of interrelated topics in such a short time by so many countries representing such an extraordinarily wide variety of interests, experiences and visions of the future is little short of miraculous. The relative success of UNCED opens the possibility of concerted action towards sustainable development under the aegis of the United Nations system.

The UNCED process underlined that social injustice prevents economic and political development. Extreme poverty, poor health, illiteracy, unwanted high fertility, the oppression of women, help to cause the sustainability crisis. Removing them will help to solve it.

In order to achieve sustainability we must first end the absolute poverty; second, meet the needs of the 'middle' three billion who are neither rich nor very poor, and their four, five or eight billion successors. Third, a quarter of the world's population, the industrialized countries, are still responsible for about three-quarters of the total burden on the environment. We must reduce this burden. All this must be done without destroying the environment on which everything else depends.

The challenge of combining these three aims brings to front and centre the question of human numbers.

No-one would pretend that poor people in poor countries are to blame for the environmental crisis. But developing countries are four-fifths of the world's population. They have a huge cumulative impact. The impact is multiplied by rapid population growth.

Today's population is 5.5 billion, and is increasing by 93 million a year during the 1990s. New projections by the United Nations indicate that world population may reach 10 billion by the middle of next century, and then continue to rise, to 11.6 billion. These medium projections are relatively

optimistic, assuming as they do that fertility rates will continue to fall. With less rapid falls the demographers show population growing to some 14 billion or more.

Nearly all of this growth will be in today's developing countries. Africa and South Asia, with 29 of the 41 least developed countries, account for more than half of total increases in world population.

One reason for the devastating effect of rapid population growth is poverty, which prevents adaptation to meet the needs of increasing numbers. The result is environmental degradation, the loss of the basic resources of soil and water.

Another reason is development. In common with their fellow citizens everywhere, people are striving to improve their standard of living. Urban and industrial growth is the criterion of development in most developing countries. But it has a high environmental cost. And the cities themselves are in crisis, partly because of rapid population growth.

The way out of the dilemma is to change the approach to development; the needs and aspirations of individuals must be placed at the centre instead of the periphery of development thinking.

Agenda 21 includes human development as one of its top priorities. Human development calls *inter alia* for better maternal and child health care, family planning services, education and employment for girls and women. These measures will help reduce rural poverty, reduce pressure on the cities and slow down population growth.

To take only one example, education for women is the basis for a wider choice of employment, a higher income and thus higher status; it is also one of the strongest factors influencing the use of family planning. In all societies, the more highly educated the woman, the smaller her family.

Human-centred development will reduce both poverty and population pressures. It is the basis of sustainable development.

We are now seeing rapid increases in the use of family planning and swift declines in completed family size all over the world, in countries and cultures as different as Kenya and Mexico, Indonesia and Egypt.

Population decisions are development decisions; but they are also the personal decisions of billions of individual men and women. Promoting individual development and wellbeing is the purpose of sustainable development – so all population policies must maintain the right of individuals to make their own choices. Agenda 21 declares and protects that right.

Agenda 21 does not mention family planning as such. This is disappointing. The phrase used in Agenda 21, "responsible planning of family size",

is less comprehensive than the language we are used to; family planning refers to the wellbeing of the whole family, not just the question of size.

But Agenda 21 is a considerable achievement; it spells out in detail the links between population, environment, development and international responsibility.

In population, the internationally-agreed aim should be to keep overall population growth within or slightly below the medium projection – that is to say 6.2 billion by the end of the century, 10 billion in mid-century and eventually about 11 billion.

Targets for the end of the century include raising the number of couples using family planning by 50 per cent, raising age at marriage, while reducing teenage pregnancy and maternal and infant mortality. They call for a doubling in resources devoted to population programmes.

About 80 per cent of population funding comes from developing countries themselves. The target is to increase the proportion of assistance to 50 per cent. For the industrialized countries, this will mean increasing their population assistance to four per cent of their aid budgets.

We hope that these targets will be further strengthened by decisions taken at the International Conference on Population and Development in Cairo in 1994, which should embody firm and precise global agreement on action. Beyond that lie the Women's Conference and the proposed Social Development Summit in 1995.

The Earth Summit was therefore the beginning rather than the end. Thanks to the UNCED process, the reality is sinking in – sustainable development is not an option but a necessity. We have accepted the principle: now we have to work on the details. ■

Dr Nafis Sadik is Executive Director of the UN Population Fund (UNFPA).

Countdown to Cairo

Planning for the International Conference of Population and Development, to be held in Cairo's International Conference Centre in Nasr City over nine days, from September 5-13, 1994, began in June 1990 with the appointment of Dr. Nafis Sadik, as Secretary-General of the Conference. But the pace of preparations was stepped up from the beginning of this year when the first expert group (on population, environment and development) met in New York.

Since then 11 meetings have been held, and a further 11 will take place before the Conference. Here is a countdown of key meetings held, and major events still to come:

1 *Cairo, April 12-16, 1992. Expert Group Meeting on Population Policies and Programmes.*

Twenty-one recommendations adopted including those touching on quality of services, decentralized delivery of services and the need to renew and extend political and financial commitments.

2 *Gabarone, Botswana, June 22-26, 1992. Expert Group Meeting on Population and Women.*

Central theme was the need for greater representation of women in planning, managing and carrying out population, development and environment programmes. This was seen not only as fair, but as a precondition for success.

3 *Bali, August 19-27, 1992. Fourth Asian and Pacific Population Conference.*

This gave a high profile to environment/population linkages, indicating that the message of the Earth Summit and Agenda 21 had got through.

4 *Bangalore, October 26-30, 1992. Expert Group Meeting on Family Planning and Family Health.*

How to improve the efficiency and effectiveness of programmes, was the central theme, bearing in mind the growing need for services.

5 *Paris, November 16-20, 1992. Expert Group Meeting on Population Growth and Demographic Structure.*

The links between population, growth and distribution and poverty, development, health, employment, education and aging are among the themes of this meeting.

6 *Dakar, December 7-12, 1992. Third African Population Conference.*

The previous African meeting in Arusha in 1984 did much to boost population policies and programmes. Since then dwindling resources, economic restructuring and the emergence of new issues such as environment and AIDS give this meeting great importance.

7 *Santa Cruz, Bolivia, January 18-20, 1993. Expert Group Meeting on Population Distribution and Migration.*

Over 70 per cent of the world's population increase will be urban during the 1990s. This meeting will look at both internal migration and urbanization.

8 *Geneva, March 23-26, 1993. European Population Conference.*

This meeting will discuss population issues in a rapidly changing Europe as well as responsibilities for assisting less developed regions.

9 *Amman, Jordan, April 4-8, 1993. Regional Population Conference for the Arab World.*

10 *Mexico City, May/June, 1993. Regional Population Conference for Latin America and the Caribbean.* ■

Four bridges to cross

For a developing world perspective on what needs to be done in the wake of the Earth Summit, *People and the Planet* turned to *Dr Mahbub ul Haq*. Formerly Minister of Finance and Planning in Pakistan, Dr Haq is now special adviser to the Administrator of the UN Development Programme and the moving spirit behind the Human Development Reports.

"The Earth Summit at Rio will, I believe, come to be seen as the start of an unprecedented process for human survival". So says Dr Mahbub ul Haq in a series of reflections on that event.

In his view the international community must cross four bridges if increasing global concern for the environment is to be translated into real action. And only one of these was crossed at Rio.

"The first bridge – the one crossed at the Earth Summit – was a conceptual bridge. The Rio Conference established once for all the close link between environment and development. It recognized that no sustainable development is ever possible without continuous growth and that while past models of economic growth must change, development must accelerate, particularly in the developing countries.

"It accepted the basic thesis that persistence of global poverty is as great a threat to global environment as misspent affluence. It focused on people – recognizing that human beings are perhaps the most endangered species on this planet and that it is human life, not just wild life, that needs to be preserved.

"The Summit recognized that the silent emergencies in the developing world – polluted water and desertified land – were just as important as loud emergencies in the rich nations – such as global warming and depletion of ozone layers. The Rio Declaration and Agenda 21 have established such a conceptual agreement."

The second challenge, says Dr Haq, is to build a financial bridge. But here progress has been "hesitant and inadequate". According to the Human Development Report at least $200 billion a year more is needed in the developing world to meet the basic human agenda and to get sustainable growth moving. But no realistic financial plan emerged at Rio.

One of the keys to this, he believes, is to open up global markets "which

are denying ten times more opportunities to poor nations than the present levels of foreign assistance". Another is to reap the peace dividend. Even a 3 per cent annual reduction in arms spending could yield $1,500 billion during the 1990s.

"The universal concern for common survival can also be mobilized to introduce the first forms of international taxation" says Dr Haq. A $3 tax on oil and coal could yield as much as $100 billion *and* help to reduce reliance on fossil fuels, he says.

The third challenge is to build a market bridge: "Environment has been raped because it is free, for individuals and for nations. So why not a market in the environment – the most precious resource needed for human survival?"

Dr Haq believes that such a market can be built by introducing tradeable permits in carbon dioxide emissions. Such a system, based upon the right of every child to equal claims to the global environment, could, he says, automatically transfer 5 to 10 per cent of developed country GNP to developing countries.

Two consequences may follow: "On the one hand this will put enormous pressure on the industrialized countries to reduce their emissions of carbon dioxides, by pricing energy more realistically. On the other hand it will enable developing countries to accelerate their growth and to make it environmentally safe by purchasing new technologies."

"Unfortunately we are nowhere near that market bridge. In fact the international treaty on climate change, agreed in Rio, violated the market principle – by trying to establish restraint on future carbon dioxide emissions without obliging the rich nations to pay for their huge global share."

The final bridge that has to be put in place, according to Dr Haq, is for institutional follow-up to the Earth Summit. This would include not only the Sustainable Development Commission – useful only if it is set up as a manageable forum of 20 to 25 countries at a ministerial level – but a Development Security Council to oversee human security in terms of food, environment and economic and social wellbeing. Finally, a second World Summit should be held in 1995, the 50th anniversary of the United Nations, to monitor progress towards such a human security system.

Asked how poor countries themselves can follow up on Agenda 21, while pressing for debt relief and the new financial structures listed above, Dr Haq suggests five action points.

"First, a plan should be prepared to provide safe drinking water and satisfactory sanitation facilities to all the people in the developing world. At present, 1.3 billion people lack access to safe drinking water and 2.3 billion people to satisfactory sanitation facilities. Polluted water and bad sanitation are responsible for most of the dis-

eases in poor lands, resulting in millions of deaths each year. An investment of around $10 billion a year could save the poor nations from this environmental threat.

"Second, a global plan is needed to conserve forestry resources. Over 20 million hectares of tropical forests are being cut down each year. What is needed is a comprehensive plan for reforestation and for alternative sources of energy.

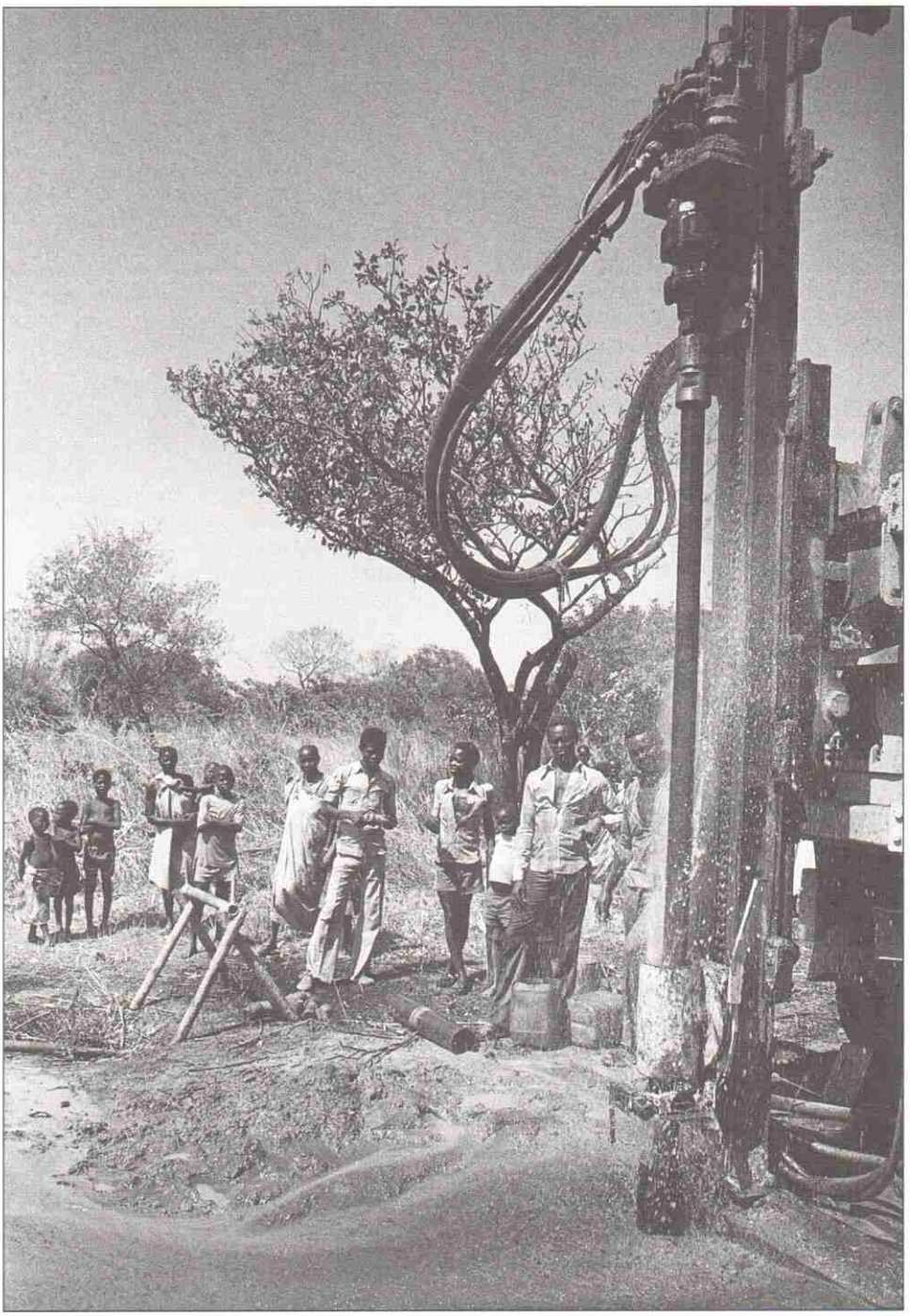
"Third, one of the major threats to the livelihood of developing countries is the constant erosion of the land. About 10 per cent of the planet's potentially fertile land has already been turned into desert or wasteland through human interference or human indifference, while a further 25 per cent is threatened. Desertification, water logging, and salinity are familiar issues, endangering any prospect of sustainable development in poor nations. A concrete plan must be prepared to reverse these trends.

"Fourth, population increase must be addressed. While it is true that the high per capita consumption in the rich nations still accounts for three-fourths of world pollution, it is also true that the high population growth rate in poor nations is beginning to put considerable pressure on their depleting natural resources.

"Reduced population growth is both in the interest of the developing world as well as in the global interest. But it should be recognized that to reduce population growth, the demand side is probably even more important that the supply side of family planning services. *Human* development may well turn out to be the most powerful contraceptive, especially investment in female education.

"What is needed, therefore, is a global compact on basic human development to ensure universal access to primary health care, basic education (particularly for females), child nutrition, and family planning by the year 2000. This may cost an additional expenditure of about $10 billion a year, but will certainly be one of the most important investments that humanity makes in its future.

A UNICEF drilling rig striking water in Southern Sudan. Today, 1.3 billion people still lack access to safe drinking water.

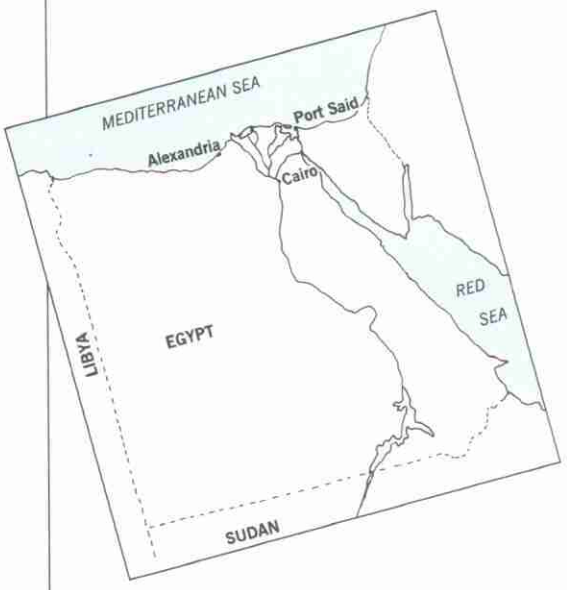


"Fifth, developing countries are generally inefficient in their current use of energy resources. For instance, for every $100 of the GNP, energy consumed in kilogrammes of oil equivalent is as high as 161 in China, 120 in Mozambique, 117 in Venezuela and 106 in Egypt compared to only 15 in Japan. There is no alternative to higher energy pricing and more energy conserving technologies in the developing world.

"Developing nations must focus on their own agenda of sustainable human development. This would require a basic understanding in their development priorities as well as considerable international support." ■

Egypt at the crossroads

Perhaps nowhere else in the world are population and resource problems so dramatic as in Egypt, site of the 1994 International Population and Development Conference. Nearly 98 per cent of Egypt's population is squeezed onto only 4 per cent of its land area. Most of the country's 55 million people live cheek by jowl in narrow green belts along either side of the Nile or in its lush fan-shaped delta, the remainder scattered along a thin strip of Mediterranean coast. The rest of this huge country consists of virtually uninhabitable barren wasteland, scorched brown by a merciless sun. *Don Hinrichsen* **reports, with pictures by** *Tamas Revész.*



Facts on Egypt

Population, end of 1992	55 million
Population growth rate:	2.4%
Population doubling time:	29 years
Birth rate per 1,000 population:	31
Life expectancy:	62 years
Infant mortality per 1,000 live births:	57
Percent of urban population:	47%
Average number of children per woman:	4
GNP per capita:	$600
Cropland per capita (1990):	0.05 hectares
People without access to sanitation 1988:	45%
People without access to safe drinking water 1988:	14%

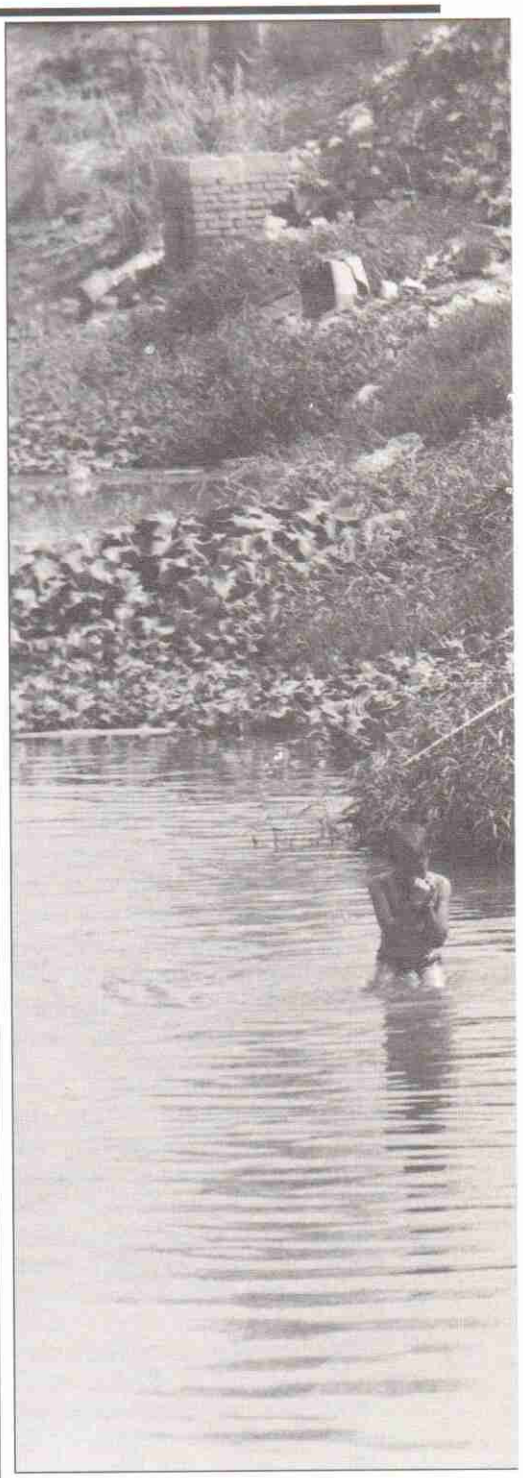
"Our number one environmental problem is population growth," insists Dr Hassan Ragab, founder and Director of the Papyrus Institute in Cairo. Ragab, one of the country's leading environmentalists, is worried that unless population growth rates begin to fall even faster than they have in the recent past, Egypt could be headed for an "ecological breakdown" with far-reaching repercussions for the country's continued development. "We have very limited land and water resources," he says. "We cannot cope with the consequences of continued population growth." Dr Ragab is particularly concerned about the loss of prime agricultural land to urban expansion, as well as the ability of the government to generate employment and maintain vital services.

Despite the fact that fertility rates have dropped from 7 children per women 30 years ago to an average of 4 today, Egypt is still faced with the frightening prospect of over 90 million people by the year 2025, unless a two child family becomes the norm early in the next century. Given the severe resource constraints the country already faces, it is hard to see how Egypt could manage such numbers. Every year the country's population grows by 1.3 million, putting increased stress on an already overtaxed infrastructure. "How can we possibly provide water, sanitation, housing, education, medical care and family planning services for 90 million people when we can barely keep up now?" asks Dr Ragab.

It is a lament the government is beginning to take seriously, especially the need to confront the challenges posed by rapid urbanization. By 1992, Egypt was nearly 50 per cent urbanized, with Alexandria and Cairo containing 30 per cent of the country's population.

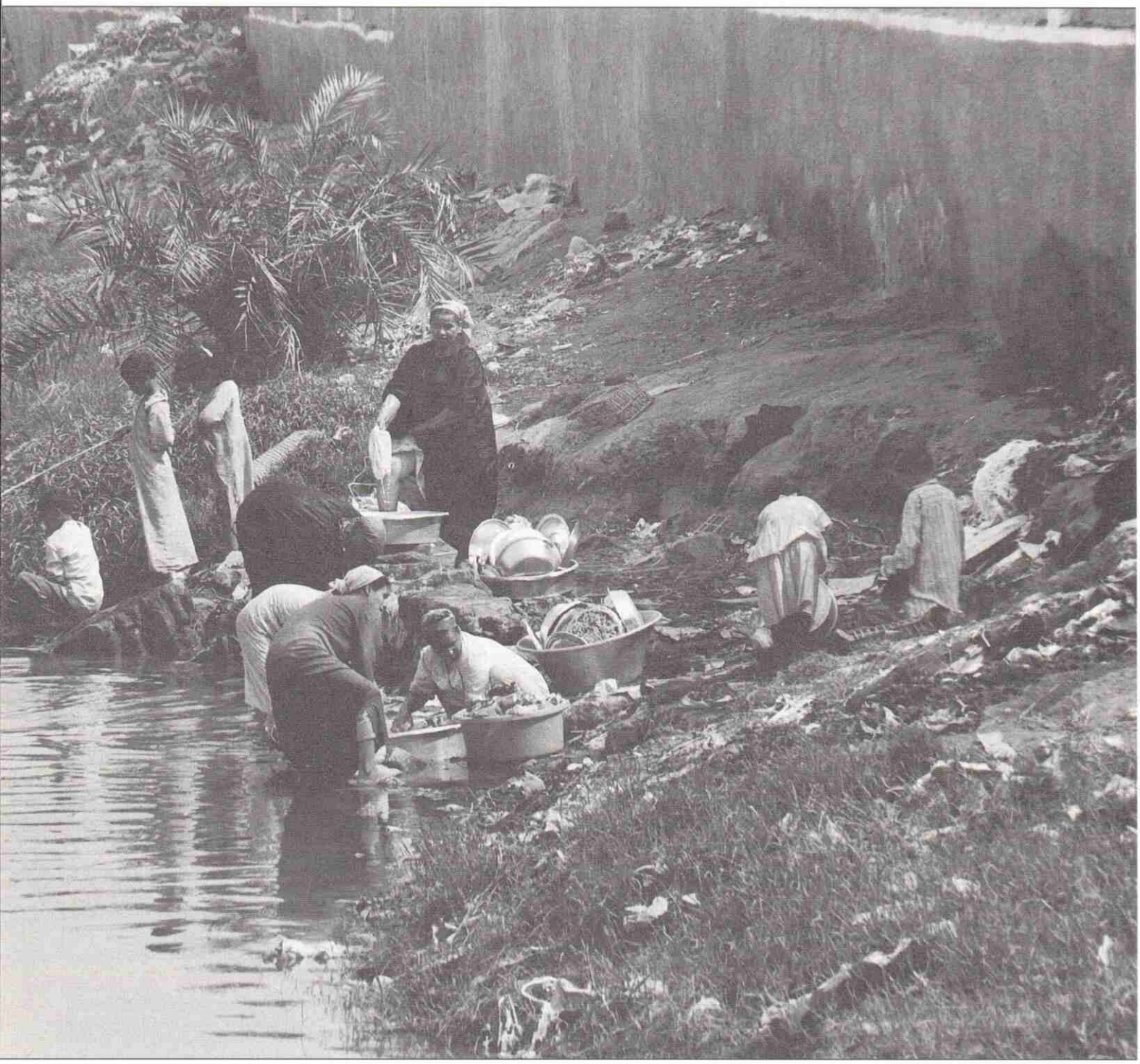
Cairo, with 12 million people, is well on its way to becoming a megacity dominated by squatter settlements and slums. In central Cairo, districts like Bab Zuweila and Bab El-Shaeriya have population densities approaching 140,000 per km^2. In many slum dwellings two, three or even four families may share one cramped room, cooking their food on stairwells and roofs. Most have no choice but to use polluted water from canals or communal water taps, which constantly leak, and there is little in the way of proper sanitation facilities.

Efforts to entice people away from Cairo have largely failed. The 'cities



Filthy drainage canal near Saqqara: women and children bathe and wash dishes and clothes.

continued page 12



Egypt's economic reforms

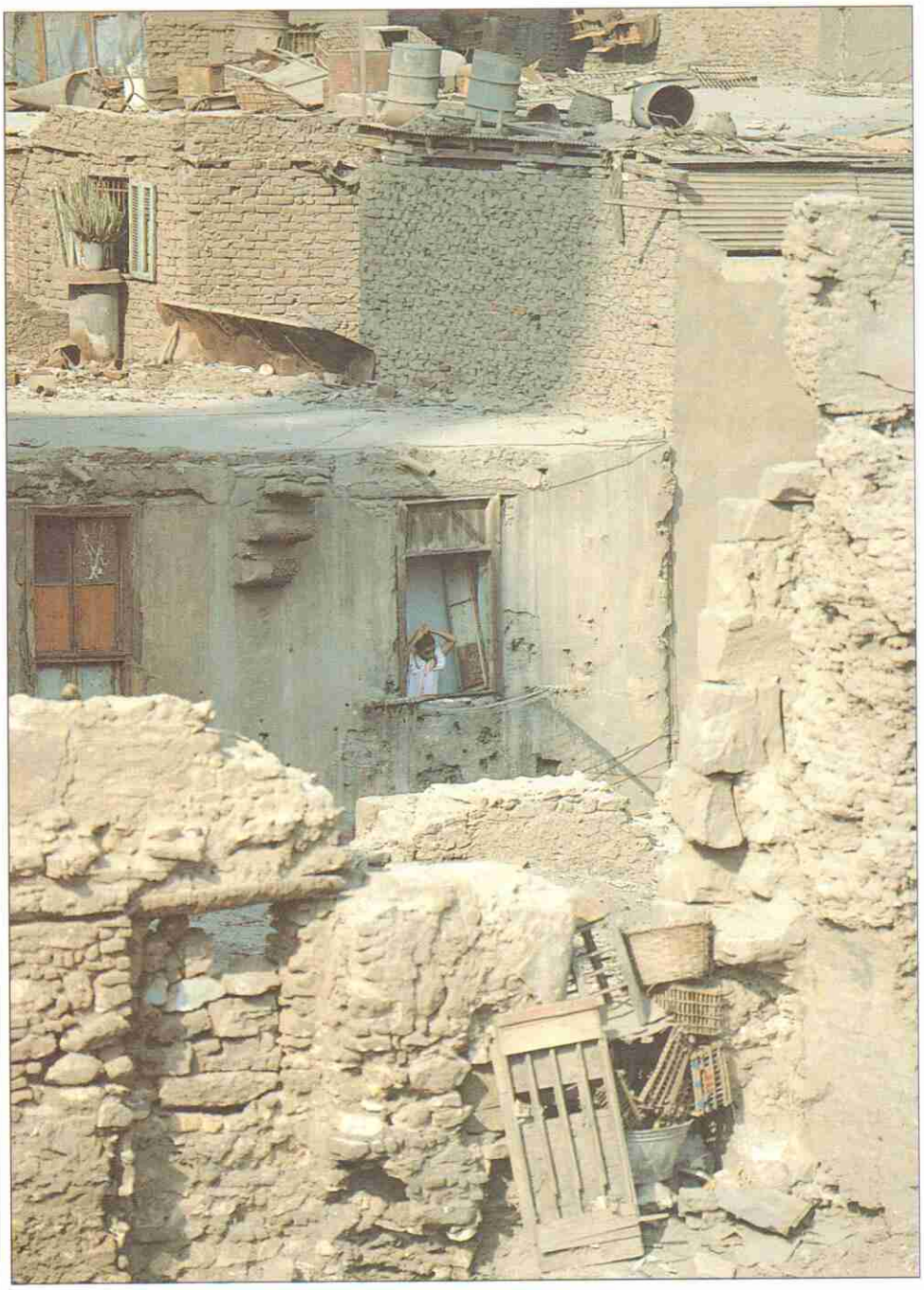
For most of the past four decades, Egypt has pursued a development strategy based on the growth of the public sector, limited foreign trade, and the provision of free social services.

But this strategy eventually resulted in large budget deficits, and the Government borrowed heavily to move ahead with development programmes. By the 1980s, the Government could no longer afford this strategy, and became unable to service its debt. Capital from foreign creditors dried up, and the Government began accumulating arrears.

In 1986, the Government initiated a modest economic adjustment programme to help the country cope with a 50 per cent drop in foreign exchange earnings from oil exports after the price of oil fell worldwide. But the adjustment programme failed to resolve the country's economic problems. Terms of trade deteriorated and inflation rose, while population growth outstripped economic growth. During the past seven years, the annual per capita gross domestic product fell from $750 to about $600. Unemployment has reached an estimated 20 per cent.

A new round of economic reforms aims to stabilize the economy, make the allocation of financial resources more efficient, bolster the private sector, promote exports and change social programmes to make sure the basic needs of the poorest people are met. ■

Source: World Bank



Tenement in a crowded area of a crowded city: Bab El-Shaeriya, where population density reaches 140,000 per km².

in the desert' programme succeeded in building a number of ring towns around Cairo, but few people actually live in them. Those that do still commute to Cairo for work.

Despite falling birth rates, "population growth remains a real problem for Egypt," explains Dr Maher Mahran, Secretary-General of the National Population Council (NPC). "But unlike many other African and Arab countries, Egypt's ambitious population and family planning programmes are receiving top level political support." President Hosni Mubarak, who initially sat on NPC's Governing Board, has made lowering Egypt's population growth rate (now at 2.4 per cent) one of his primary development goals.

After two decades of population efforts with only modest reductions in fertility, authorities are now beginning to see a real breaththrough. Since 1988 Egypt's contraceptive prevalence rate (the average number of women using contraceptives at any given time) has increased by more than 10 percentage points. It now stands at just over 50 per cent. "This makes Egypt the first Muslim country to break the 50 per cent barrier," smiles Dr Mahran.

The government credits the success to its far-flung public information and education campaigns to reduce family size, including the production of highly popular TV spots using well known actors and actresses, the rapid expansion of maternal and child health care (MCH) and family planning clinics, the co-operation of Muslim clerics, and better educated young women.

Non-governmental organizations, like the Egyptian Family Planning Association (EFPA) and the Egyptian Junior Medical Doctors Association (EJMDA) have played important roles in the fight to bring down population growth rates. The Egyptian Family Planning Association, an IPPF affiliate since 1963, now has nearly 500 clinics throughout the country's 26 Governorates. EJMDA, an association of young private doctors, boasts 15,000 members, 40 per cent of them women. It has a core of 1,500 doctors, specializing in gynaecology and obstetrics, who promote family planning through their own private practices.

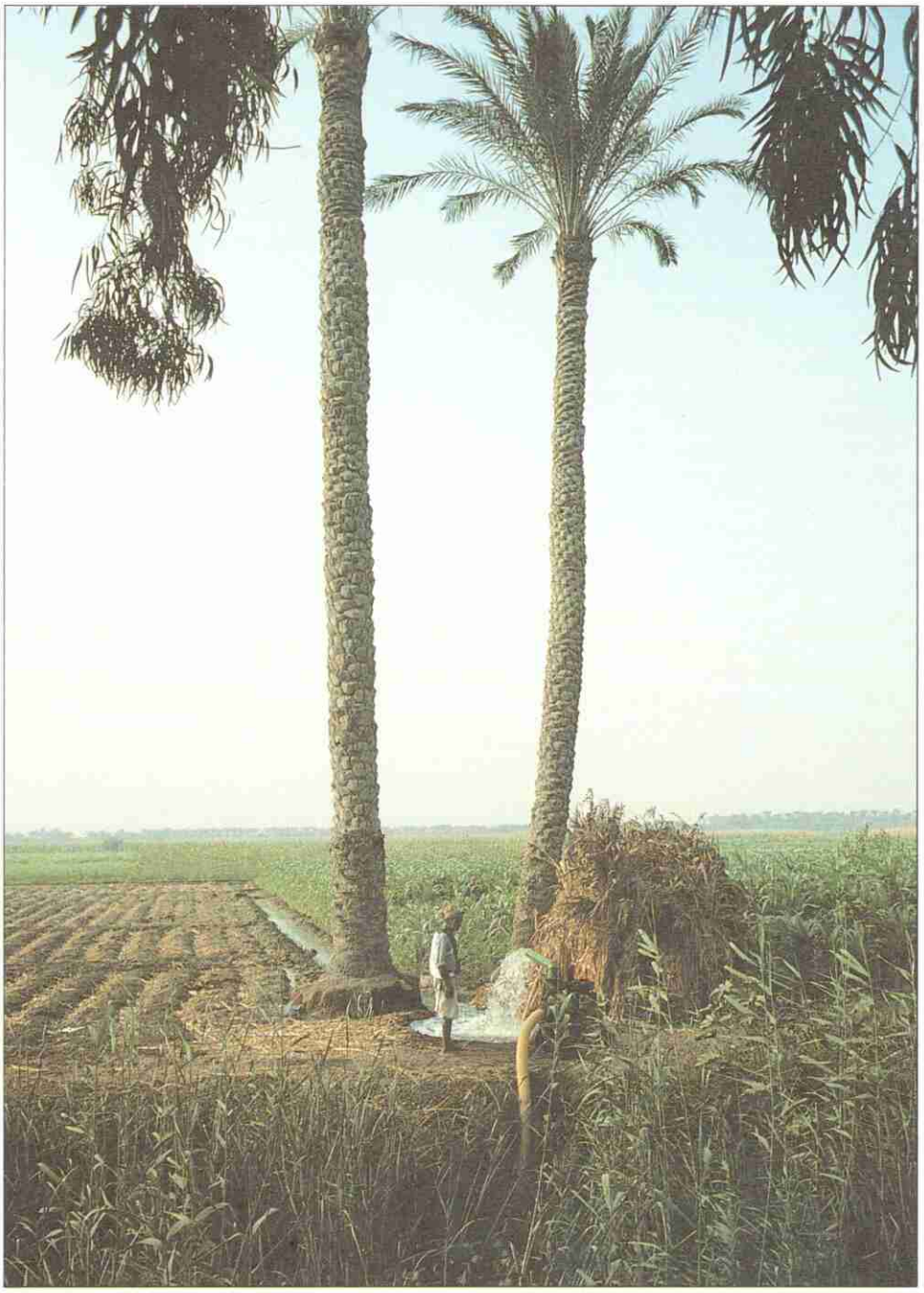
Dr Anwar Kamel Ahmed, a member of both the EFPA and EJMDA, runs his own clinic in the small dusty delta town of Senbellaween. Born and raised in the village, which still has more donkey carts than cars, Dr Ahmed has only recently returned to open his own practice, specializing in gynaecology and obstetrics. When not at his clinic, which is open every day except Friday from 7-9 pm, he supervises EJMDA's regional office in the nearby city of Mansoura and also commutes to Cairo three mornings a week to work for EFPA as head of their medical section.

"I get about 10 new family planning acceptors every month at my clinic here in Senbellaween," claims Dr Ahmed. About 120 women come to see him on a regular basis for family planning advice and services. As elsewhere in Egypt, the women of Senbellaween tend to prefer IUDs to pills, injectables, or other forms of contraception.

Dr Ahmed, who completed a special course in family planning services at Ain Shams University in Cairo, is convinced the attention given to population and family planning programmes in the state-controlled mass media and the work of the Ministry of Health and NGOs has resulted in a demographic turnaround. "Most people know about family planning," observes Dr Ahmed. "Our challenge now is to improve services and outreach, to keep up with a growing

continued page 16

Paying the price for pure water



Irrigating crops from a canal near Saqqara. Pesticides drain back into the Nile, affecting drinking water.

Water is a problem in Egypt. As the population has grown, the per capita share has fallen from 2,000 cubic metres to 600 cubic metres per annum. The supply for both fields and cities depends on mechanical pumps, and often water does not reach the high floors in the blocks of flats in the cities.

Water also represents a health problem because the water itself is not healthy. Water treatment stations cannot cover the needs of the population.

Paradoxically, the widespread fear that drinking water is not clean has lowered demand for tap water and increased sales of bottled water, which now costs as much as petrol.

As a result of population growth, much land has been lost to housing and food imports have increased. In response farmers use chemical fertilizers in excessive quantities to increase yields. This has led, in turn, to widespread disease and the death of animals, fish and birds because of the misuse of chemicals. Last year farmers in Egypt used 3,350 thousand tons of imported fertilizers, an increase of over 1,000 tons in 10 years. The amount of fertilizer used per acre ten years ago was 390 kg. Today, this figure has jumped to 547 kg. At the same time the use of agricultural pesticides has increased to 19,000 tons.

Studies have shown that the excessive use of chemical fertilizers affects the salt balance in the soil and changes its acidity and its natural chemical components. The farmers are now also more liable to contract cancer and are more prone to cirrhosis of the liver and kidney failure.

Sparrows, hoopoes and other field birds have died. Fish have also died as a result of central drainage into the clean-water canals. Livestock have also been affected through contaminated plants.

The Ministry of Agriculture has realized the depth of the problem and is now concentrating upon manual pest control, the use of biological pest control methods, male pest sterilization and the use of hormones to decrease pollution.

But the rate of kidney failure has risen as a result of pesticides and chemical fertilizers draining into the Nile and wells. Thus pesticides have reached the kidneys of Egyptians via the fruit and vegetables they eat and the water they drink. Each year 200 out of every million people develop kidney failure and the government spends nearly E£30 million ($10 million) treating 4,000 poor patients with kidney dialysis. Some 250 kidney transplants are also performed every year.

Efforts are being made to solve these problems. Among them is an agricultural law which forbids building on fertile land. There are also calls for another law to protect soil from pollution and deterioration. The Land Improvement Authority has been commissioned to conduct a wide-ranging survey of all the arable land inside the Nile Valley, and to make chemical, biological and mechanical analyses to establish how fertile this land is since there has been an absence of silt which used to be deposited every August from the Nile. Twenty years ago this silt stopped when the High Dam was built. There are now plans to pump it through a pipeline into the flow of the Nile to enrich the Egyptian soil on the banks of the Nile which has been eroded by the water current. ■

Wagdi Riad

Wagdi Riad is science editor of Al-Ahram.

Women provide hope

Having achieved their share of education, training and experience, Egyptian women are looking forward to assuming leading roles in society, *Wagdi Riad writes.*

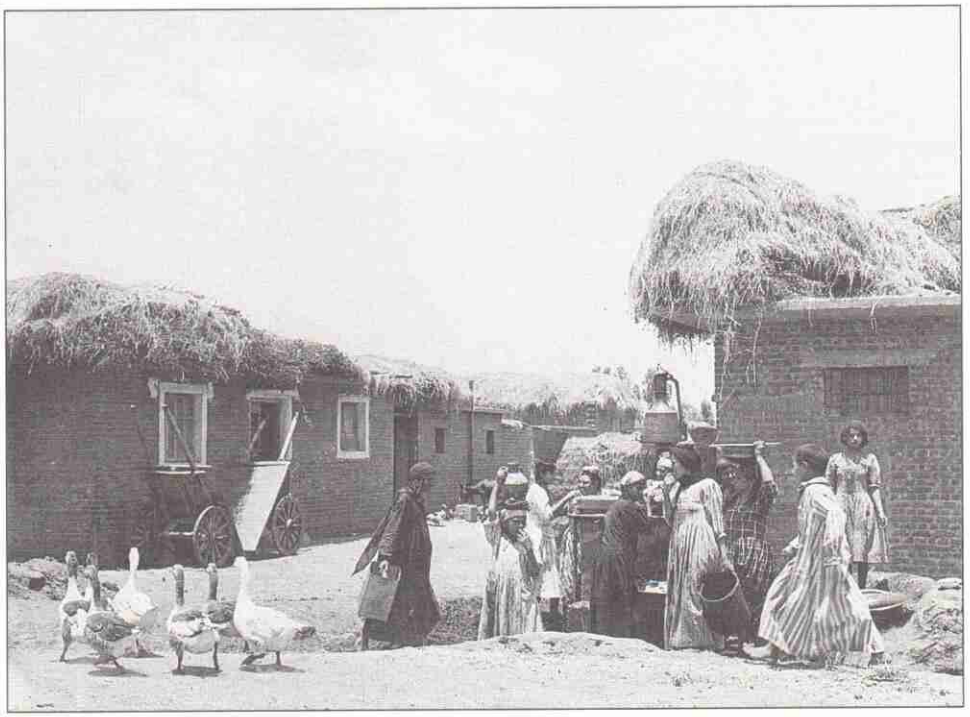
It is no longer unusual in Egypt's conservative society with its rigid view of women, to visit a ministry, an institution or an agency to find that there is a woman at the heart of it.

Moreover, women have taken over all kinds of jobs which were previously excluded to them, such as taxi drivers, police officers, airline pilots or even a brigadier general in the army medical corps. Of all the government positions the only one which a woman cannot hold is that of judge or head of the bench.

Meanwhile, Egyptian women retain special responsibilities within the home, especially for the education of their children. Although schools in Egypt open their gates every morning, the real education takes place at home, because of the overcrowded classes and the lack of control in schools.

Although women represent half the total population, statistics show that they represent 17 per cent of civil servants, 97 per cent of primary school teachers, 42 per cent of insurance workers, 40 per cent in aviation and tourism, 39 per cent in the media and cultural spheres, 28 per cent in financial services, 16 per cent in agriculture, 14 per cent in transport and communication, 9 per cent in health services and 28 per cent in university teaching jobs.

In Kom Tamay (population 3,000), 240 km south of Cairo, the Anglican Church has shown how participatory development can break through to rural women. Young university graduates worked with village women to promote needlework, household economics, small animal husbandry, beekeeping, and hygiene, family planning, girls' education, breast-feeding and abolition of female circumcision. The women there are handling all of these things for the first time because in the past tradition had ordained that they should stay prisoners in their own homes.



A. ALBERT

Fetching water at Kom Tamay village.

This experiment has raised family income, lowered family size and encouraged rural development. Electricity, clean water and television sets have entered the village and the inhabitants have asked for development, health care, agricultural and education centres. The village has become a completely different one where Christians and Muslims work side by side and the church is built next to the mosque. The inhabitants appear to be on the road to sustainable development and have a clean environment. ■

Beating the numbers in Giza

Dr Abouzeid Mohamed has just opened his private family planning clinic in the Giza district of Cairo, not far from the famous pyramids. Not long ago, Giza was a separate town, some 45 minutes by car from the capital. Today, it is just another crowded, noisy sprawling suburb choked with dust.

"I have no problem attracting clients," says Dr Mohamed, sitting behind his desk in an air-conditioned office. Demand for family planning services seems to be growing as rapidly in this area as in the rest of Cairo. "I get 50 new family planning acceptors every month, and insert an average of 2-3 IUDs every day," he explains.

Mrs Amal, a 23 year-old housewife with just one child, has come to Dr Mohamed for the first time. Both her mother and sister practise family planning and although she wants another two children, Mrs Amal intends to space out her births over 10 years.

"We decided when we were engaged that we would have no more than three children," affirms Mrs Amal. Her husband, who works for the Ministry of Education as a clerk, does not earn much money and she wants to be sure that they can properly care for their offspring. "Having more than three children would be too difficult for us," she explains.

She also admits that the TV spots encouraging young couples to have only 2 or 3 children makes sense. "I am aware of the government's efforts to reduce population growth, and I am in favour of this," she says firmly. "Fewer people will also mean a better environment for our own children."

Mrs Amal, like many young Egyptians, has a secondary school education and wants to build a better life for herself and her family. She, and thousands of others like her, are the main reasons behind the country's falling birth rates. ■

Don Hinrichsen

Senbellaween: village in a million

Mrs Sameha El Deb has worked in the delta village of Senbellaween as a midwife for 45 years. Over that time she has delivered thousands of babies and counselled village women about family planning, hygiene and child care. She has also witnessed profound demographic changes.

"When I first began as a midwife, women in this village had 7-9 children each on average," explains Mrs El Deb. "Today, most women have no more than three."

Mrs El Deb is also a trained nurse and has even taken a nursing and MCH course in Sri Lanka paid for by IPPF. She is still working as a midwife and nurse and continues to inform women about the need for family planning and child care. "Whenever I deliver a baby, I always explain to the mother the need to use contraceptives, so that she does not become pregnant again right away."

The message is being heard by an increasing number of village women. Mrs El Deb recalls that 40 years ago it was a struggle to convince women to practise family planning. "They thought it was against the wishes of Allah or their husbands," she explains. "But today young women often ask me about family planning and the local religious leaders support the government's programmes."

For the past decade, Mrs El Deb has also received help from local health motivators (*raidat riffiat*). These women are volunteers and receive no compensation, other than travel and living expenses when attending training sessions. Although all *raidat riffiat* fall under the auspices of the Ministry for Social Welfare, they work closely with local midwives, health workers and family planning specialists. Their main task is to visit the homes of village women in an effort to persuade them to take advantage of health care, especially if they have young children, and to become family planning acceptors.

Some, like Mrs Wegdan Shear, take their voluntary jobs very seriously. Mrs Shear's husband is dead and she has the time and motivation to help her community. "I visit about 20 families a month and talk to them about health, household sanitation and family planning, urging them to take advantage of local health services," she explains. But Mrs Shear also takes the time to explain to women, usually those with objections to family planning, that the Koran says nothing against limiting births. "Sometimes I even talk to the men about family planning," says Mrs Shear with a grin. At the moment, she is averaging about 3-4 new family planning acceptors every month.

Mrs Wegdan Shear, family planning motivator.

At 18, Miss Wafaa Abd-El Fattah is one of Senbellaween's youngest motivators. She recently graduated from high school and is engaged to be married. But instead of relaxing after years of schooling, Miss Abd-El Fattah decided to do something useful with her free time and has just finished a three-month training course for health motivators.

Says Miss Abd-El Fattah, "After I'm married I'm sure I will have no more than three children. It is important that population growth be controlled and that people take more responsible decisions about family size."

Thanks to the work of Mrs El Deb and the health motivators, the Egyptian Family Planning Association's clinic in Senbellaween gets about 60 new family planning acceptors every month. The clinic's woman doctor sees an average of 320 women a month who come in for family planning counselling, check-ups, or the insertion of IUDs.

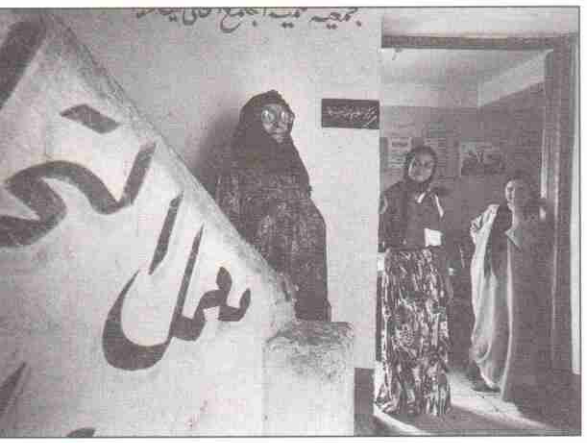
Senbellaween may be a village in a million, but its population growth rate is now below the national average and still falling. The new challenge is to repeat such success in rural Upper Egypt, where growth rates are still high and resources continue to deteriorate under an onslaught of increasing numbers. ■

Don Hinrichsen

Below left: *Meet Sweed village: large farmer's family, with eight children still alive and five (and first wife) dead. Three dayas (traditional midwives) at local clinic.*

demand."

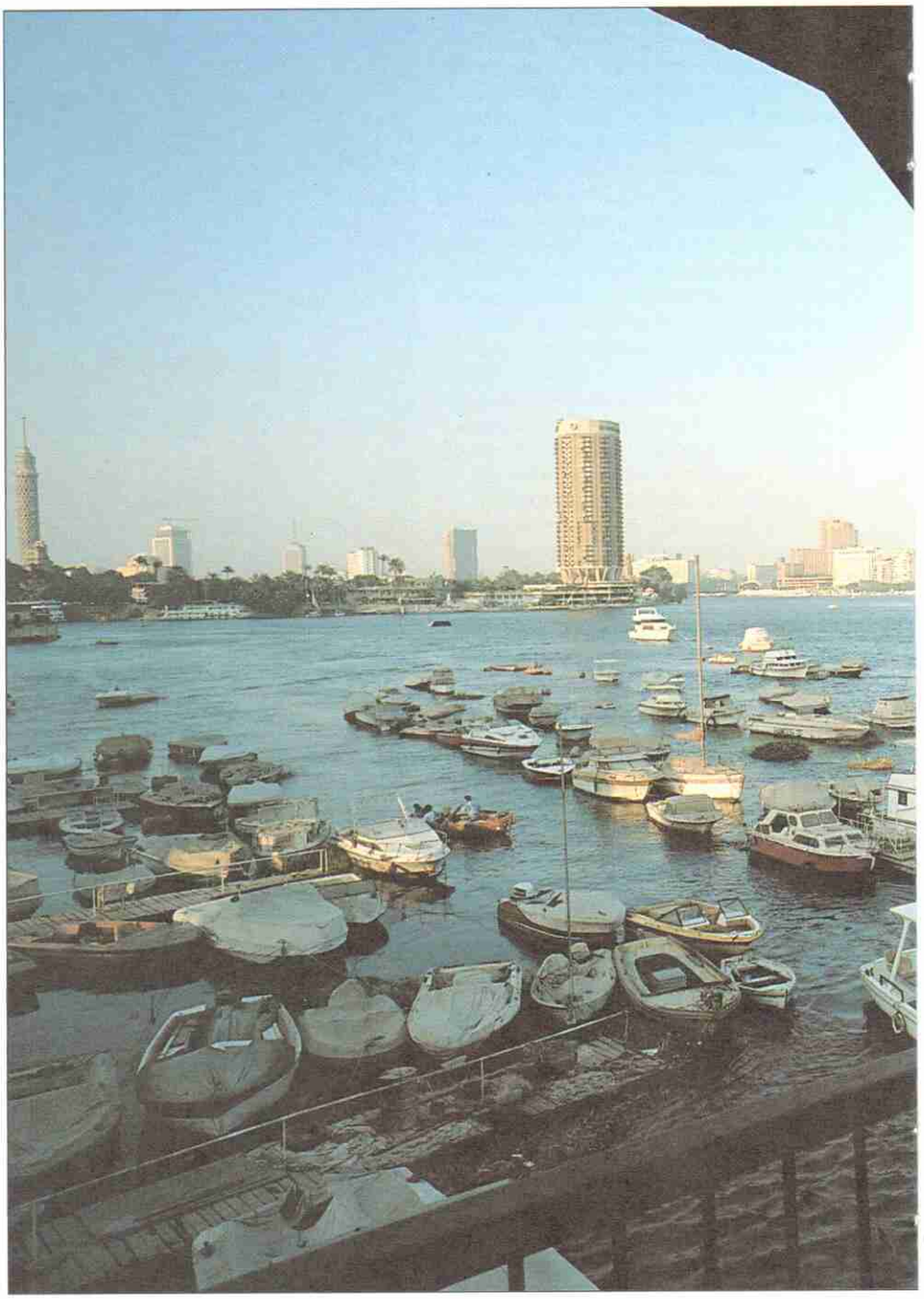
Dr Mona Said Ahmed would agree with that statement. She runs the only EFPA clinic in the village of Meet Sweed, about an hour from Mansoura. "I get 80-90 new family planning acceptors every month here," she explains. "And I insert, on average,



about 60 IUDs a month." Most of her clients heard about family planning on radio or TV or from local announcements. Young women, in particular, want to plan their families and space out births. The preferred number of children for young couples in this village has already dropped to 3.

"Of course, we still find women who want to practise family planning but cannot because their husbands want more children to work the fields," explains Dr. Mona Ahmed. "But even in this farming community, that attitude is now the exception, not the rule."

In stark contrast to its success in bringing down population growth, Egypt has made little headway in coming to grips with an increasingly degraded environment. Ensuring the quantity and quality of water resources is the country's most pressing environmental problem, followed closely by the continued loss of agricultural land to urbanization and poor irrigation practices.



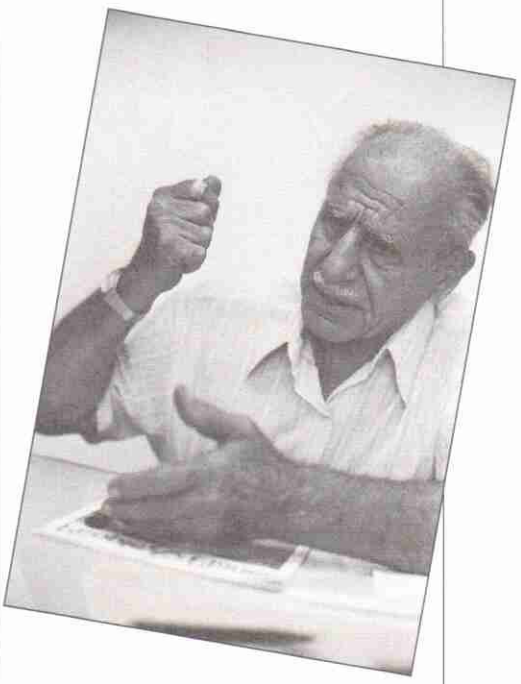
It is no exaggeration that without the Nile there would be no Egypt, only a simmering sea of sand. For some 7,000 years the "river of life" has sustained Egyptians. In Roman times, thanks to the Nile, Egypt was known as the breadbasket of the world. Today, the country imports three-quarters of its food, including huge quantities of wheat. The combination of pop-

Right: *Dr Hassan Ragab, making a passionate point about the state of the Nile in Cairo (below).*

ulation growth and limited land resources has forced Egypt into being a net importer of food.

Worse may follow. Given limited water resources and intensive use, Egypt is faced not only with water shortages, but with an alarming decrease in water quality as well. Of Egypt's 58.4 billion cubic metres of freshwater available every year – nearly all of it from the Nile – some 57.2 billion cubic metres is already used, mostly to irrigate 17.6 million hectares of agricultural land along the Nile and its delta.

At the same time, the river is increasingly polluted with salts leached into it from irrigated fields, from the run-off of fertilizers and pesticides and from municipal and industrial wastes. Most existing sewage treatment plants, for example, are antiquated; many work only part of the time if at all. Most industrial waste is dumped in the river untreated, despite laws against it. It is estimated that nearly 21 billion cubic metres of waste water flows into the Nile every year.



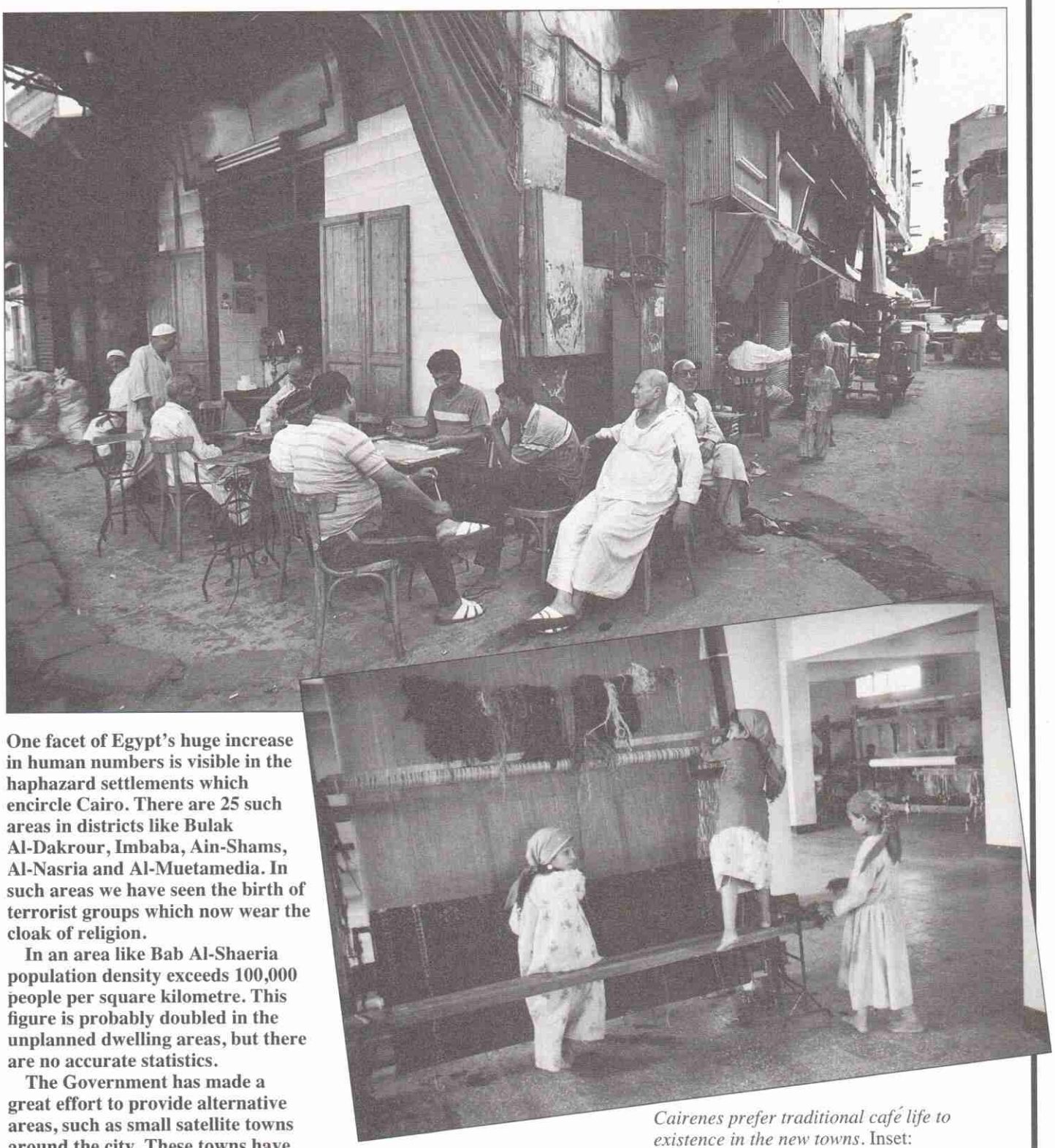
"The state of the Nile is scandalous," fumes Dr Hassan Ragab. "The ancient Egyptians revered the river and never polluted it, but today we use it as a toilet."

Outside Dr Ragab's office overlooking the Nile on fashionable Zamelek Island, another aspect of the water crisis is painfully evident – a broken water pipe has flooded the entire street. Repair workers have just arrived after three days of complaints and much wasted water. In some areas of the city, broken water mains and leaky public standpipes are a permanent fixture.

By the year 2000, Egypt's water needs are projected to be nearly 70 billion cubic metres a year, with industrial water use doubling. The only way more water can be squeezed out of the Nile is to re-use more irrigation water before it flows into the Mediterranean, evaporates, or seeps into the ground. According to experts, future water ▶

continued page 19

Desert towns still shunned



Cairenes prefer traditional café life to existence in the new towns. Inset: *School-age girls at work in a carpet factory.*

One facet of Egypt's huge increase in human numbers is visible in the haphazard settlements which encircle Cairo. There are 25 such areas in districts like Bulak Al-Dakrour, Imbaba, Ain-Shams, Al-Nasria and Al-Muetamedia. In such areas we have seen the birth of terrorist groups which now wear the cloak of religion.

In an area like Bab Al-Shaeria population density exceeds 100,000 people per square kilometre. This figure is probably doubled in the unplanned dwelling areas, but there are no accurate statistics.

The Government has made a great effort to provide alternative areas, such as small satellite towns around the city. These towns have been well planned and supplied with water, power and sanitary facilities. However, the population of the unplanned areas prefer to remain in their slum dwellings. Among the reasons for this is the proximity of the unplanned areas to Cairo and to the illegal activities and informal jobs they provide.

The Government has built new towns and using the police to arrest those who resist, it has tried to evacuate the population of these run-down areas and distribute the new housing units amongst them. This happened in the area of Bulaq whose population was evacuated to Ain-Shams, but without success.

The Government has built Sadat City (85 km north of Cairo), 6th of October City (50 km west of Cairo), 10th of Ramadan City (40 km east of Cairo), 15th of May City (15 km south of Cairo) and Kattameen City (30 km north-east of Cairo) to house the growing rural population. But these settlements remain unpopular. ■

Wagdi Riad

Passing the time of day in the mosque at Bab Zuweila.

needs will have to be met from better management of the resource, mainly through recycling, conservation and improved technologies. Better water management, in turn, could have a significant impact on Egypt's other major problem – the continued deterioration of agricultural land from poorly planned and managed irrigation systems.

The country has been rehabilitating degraded agricultural land since 1882. But now government officials at the Ministry of Public Works and Water Resources are in a race against the clock. About 40 per cent of Egypt's irrigated land suffers from salinization or waterlogging at any given time. As soon as some land is rehabilitated, more is in need of it. "It is like being on a treadmill," claims one government official. Still optimistic, Sayed Mohamed Hassan, Director of Land Reclamation Projects for the Ministry, claims that by the year 2000 Egypt will have reclaimed 2.8 million feddans (6 million hectares) for agricultural use. What the *net* gain will eventually be is anyone's guess.

Coupled to water shortages and degraded land is the shrinking size of the average Egyptian farm holding. As a direct result of population growth and inheritance laws (favouring sons), the average farm plot has been reduced to 1 or 2 hectares. Fortunately, farming is highly intensive in Egypt. Better use of available water resources could improve yields, but the fragmentation of small farms will continue so long as the population continues to grow at current rates, particularly in rural areas of Upper Egypt where family planning services remain inadequate.

So long as donors continue to pour in aid money and concessional loans – the US Agency for International Development commits around $1 billion a year – Egypt can probably continue to rehabilitate degraded land and build more irrigation canals and wastewater treatment plants. But remedial measures are no substitute for sustainable resource management.

"What this country needs is an integrated development plan which combines population and family planning programmes with environment and resource management," concludes Sjaak Bavelaar, the UN Population Fund's Country Director for Egypt. The main development agencies operating in Egypt have already formed specialized donor groups on key issues. Mr Bavelaar is the chairman of one group set up to co-ordinate aid money and priorities for population programmes.

Not surprisingly, there is also a donor group on the environment. With continued success on the population front, there is hope that Egypt will now start paying more attention to the dismal state of its environment. If not, the country's stunning advances in family planning may be cancelled out by a crumbling economy and a ruined resource base. ■

Don Hinrichsen, a writer and UN consultant specializing in population and environmental issues, is a contributing editor to this publication. Tamas Révész is an award winning Hungarian photographer based in Budapest.

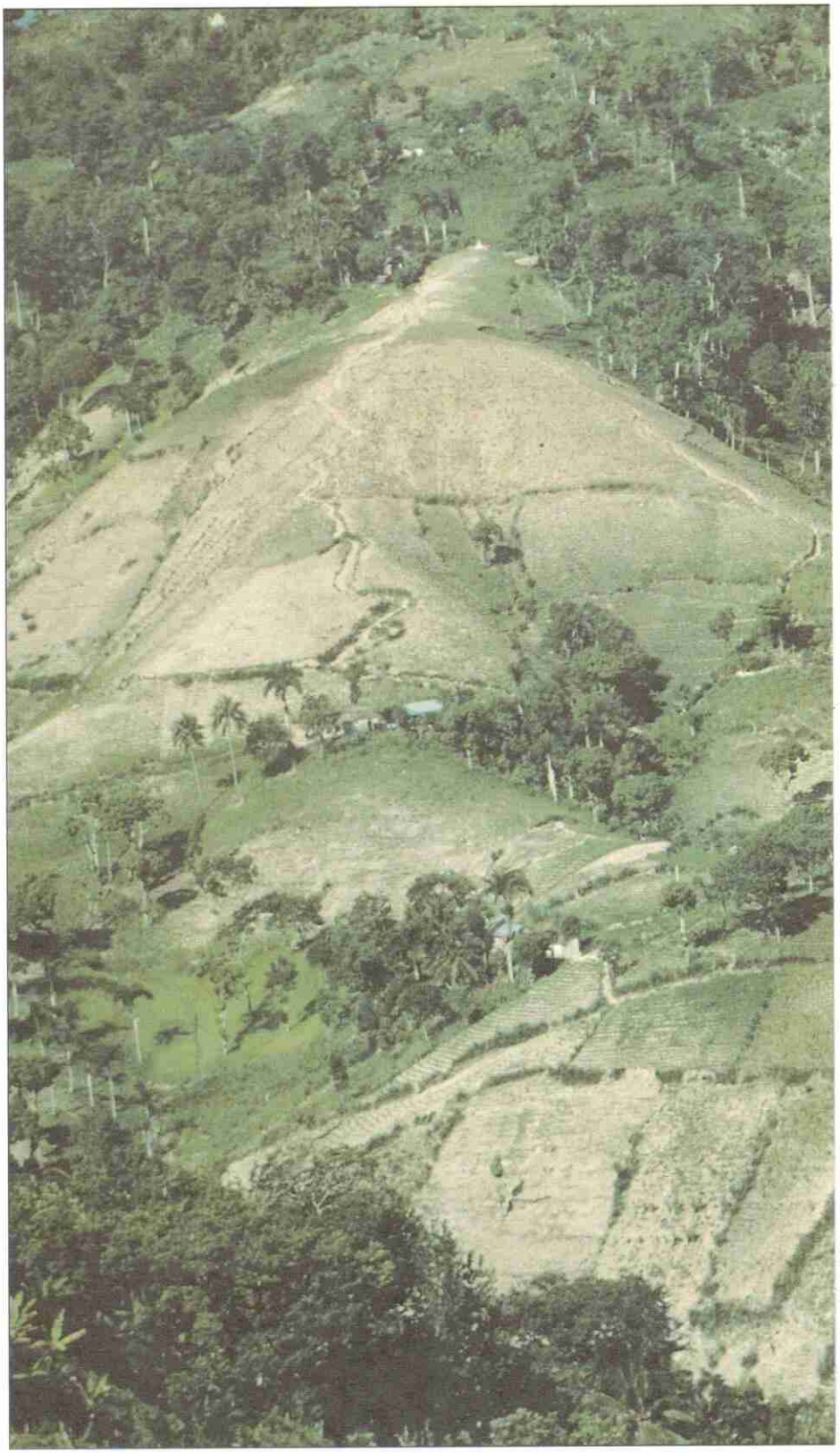
What hope for Haiti?

December 6th, 1992 marks the 500th anniversary of Christopher Columbus's landing on an island he named Hispaniola. Its indigenous inhabitants, no more than 300,000 at the time, called it Haiti – the mountainous land. Columbus's landing should also be remembered as the starting point for the process of environmental degradation of the originally forested ecosystem. *Francisco Di Blasi* **reports.**

Until the Conquest, the natives of Hispaniola lived in harmony with their environment. Since their cultivation patterns were oriented to meet sustenance needs they did not exhaust the soil. But as European domination became established, cultivation became specialized and exploitative of both natural and human resources. Disease and malnutrition added to hardship of forced labour drove the natives to virtual extinction and paved the way for the importation of African slaves.

When the French took the Western third of Hispaniola, they carved out Saint-Domingue, a true gem among all the colonies in the world. By 1789, the colony accounted for one-third of France's foreign trade and produced one third of all the sugar consumed, in what it was considered the civilized world. The seeds of freedom planted during the Age of Enlightenment produced the French Revolution and also

continued page 22

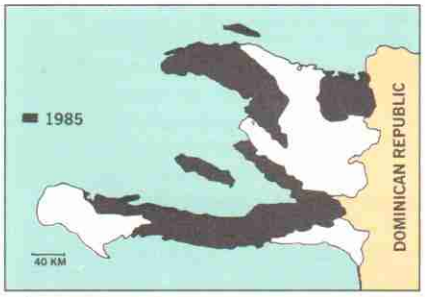


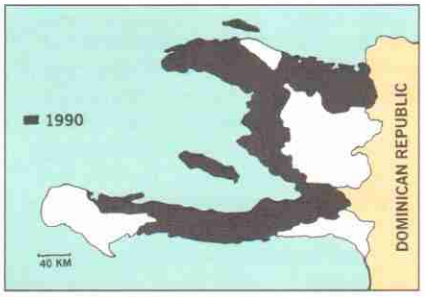
Deforestation in Haiti

Maps show the recent and rapid progress of deforestation in Haiti. Forest cover is now less than 1 per cent of the national territory of 27,000 km².

Source: Futures Group

STILL PICTURES/MARK EDWARDS





Impoverished peasants are driven to desperate measures to feed their families. As tree cover goes, soil erosion sets in, as seen above.

Opposite: *Child in a Haiti orphanage. Inadequate family planning services mean that many poor families have more children than they are able to feed.*

inspired the revolt of 500,000 blacks and 30,000 freemen of colour against 28,000 French colonials in Haiti.

In 1804, Haiti (from the Amerindian *Ayiti*, meaning 'land of high mountains') the first nation of self-liberated slaves in the history of mankind was born. The process unfortunately was not able to up-root the ethnic ambiguities and power cleavages that persist even until today. Twenty-one years after independence, a weakened and isolated Haiti was forced to compensate her former colonial masters for the loss of their plantations, under the potential threat of French guns. Funds had to be borrowed from French commercial markets and the debt was finally paid in full to the Americans (who had bought it from the French) more than a century later.

There is no doubt that Haiti's complex contemporary developmental and environmental issues are unique and deeply rooted in its past. Its problems can hardly be blamed on the majority of its 6.4 million inhabitants. But, as a well known politician admits, the few privileged Haitians who have dominated politics since 1804, have not been taking care of the country at all.

Since the fall of Baby Doc Duvalier in February 1986, Haiti has acquired a new profile in the international media. Most recently, world attention has focused on its abject poverty, the boat people, deforestation, total environmental degradation, civil liberty abuses, and the struggle for democracy all of which exist in this small country which is less than two hours away from the United States.

Some of the issues have been presented as if they were the sole reason for the emigration of Haitians not only to the United States, Canada and France, but to all the other islands of the Caribbean basin as well. In reality, net population growth, despite death, hunger and disease is a built-in factor, although not the origin of all those problems.

A recent study by two leading demographers specializing in the Caribbean, Jean-Pierre Guengant and John May, confirmed that Haiti's fertility rate has remained consistently

continued page 24

Family planning challenge

Haiti presents a special challenge to family planning professionals. With a total fertility rate of 6 – twice that of its Caribbean neighbours – the impact of runaway population growth on this fragile environment and ravaged economy is devastating. Accelerated demand for fuelwood is completing the stripping of the 5 per cent left of the original tree cover, and three-quarters of Haiti's 6.4 million population live in absolute poverty. Experts predict that by 2025, Haiti could become the most populated country in the Caribbean.

Population pressures have done little to stimulate declines in the fertility rate. Although Haiti has the lowest contraceptive prevalence rate in the region (10 per cent for modern methods), 80 per cent of women have expressed a desire to plan their pregnancies. Despite the evidence of unmet demand, usage remains low. The lack of public sector support for a national family planning policy has inhibited the growth of an adequate service delivery capacity.

Efforts to launch a public sector programme have been disappointing. Family planning activities were first initiated in 1973. After nearly two decades of international population assistance, high fertility rates persist. Chronic political instability and a rapid succession of personnel within the Ministry of Health have hampered the continuity and effectiveness of the national family planning programme. Today, public and governmental support for family planning remains ambivalent at best.

The private sector's role in the delivery of health care services, however, has not been insignificant. Nearly half of Haiti's primary health care services are provided by private voluntary organizations operating throughout the country.

In light of the disappointing results in the public sector programme, it was envisaged that these institutions could play a valuable role in expanding family planning services. In August 1986, IPPF Western Hemisphere Region signed an agreement with USAID to develop an institutional framework within the private sector to support family planning service delivery on a national scale.

PROFAMIL (Association pour la Promotion de la Famille Haïtienne) began its programme activities with IPPF support in February 1986, within days of the fall of Duvalier's Regime. In 1991, in its sixth year of active programme operations, PROFAMIL had already established itself as the best-known family planning service provider in the country. This is remarkable considering the highly volatile and disruptive political climate that has prevailed in Haiti since PROFAMIL's inception.

Haiti's first truly democratic government was inaugurated in February 1991. Eight months later, President Aristide and his administration were forced out. Many public donors, such as USAID and other foreign assistance agencies, responded by withdrawing their support. This, in effect, immobilized a significant segment of the Haitian economy which is largely driven by development assistance. The ensuing trade embargo crippled the country, but did not dislodge the forces that had taken power from Aristide. Over time, the people of Haiti have adjusted to these conditions, and its rulers have developed alternative sources of fuel and other commodities to keep the country running.

Under Aristide's government, there were indications that there could be a positive role for family planning within the Ministry of Health, but these efforts have all but disappeared following the September 1991 coup. Meanwhile family planning services by the public sector continue, although negative effects can be anticipated as no supervisory, training or information activities are being carried out.

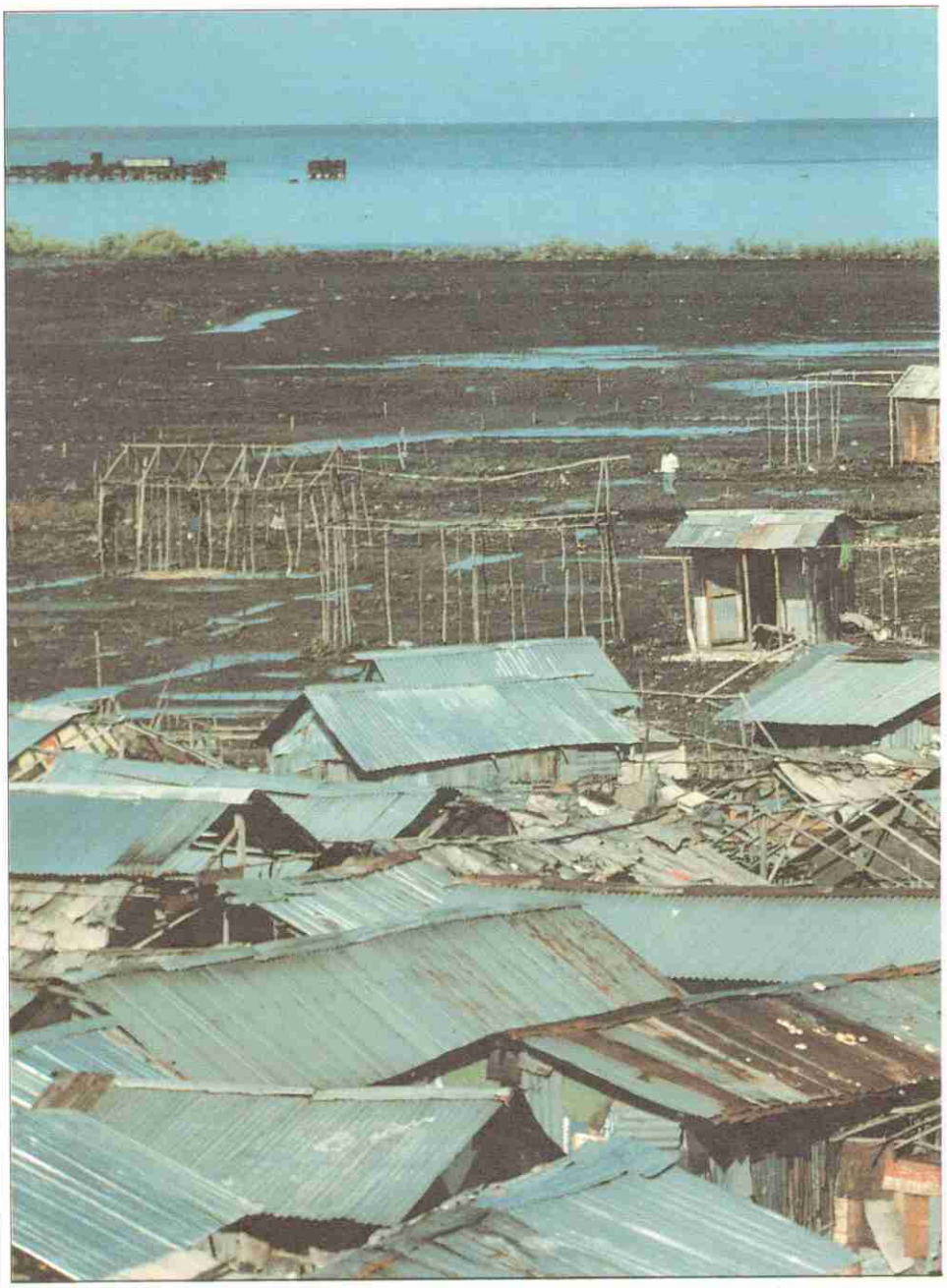
PROFAMIL and IPPF/WHR continue to co-operate with public sector family planning activities on a technical level, but no advocacy or policy level dialogue is being pursued.

And in the present desperate socio-economic situation, PROFAMIL has found it difficult to abstract itself from other equally important issues such as youth-oriented activities, the role of women in society, and the impact that AIDS has in Haiti, just to mention the most critical ones.

Women's incorporation into active political and economic life has been traditionally hindered by cultural values, mores and attitudes. There is, however, a marked difference between the participation of women in politics (3.4 per cent of high-level government positions were filled by women in 1987) and female participation in economic activities (46 per cent of all women had some form of employment during the Eighties).

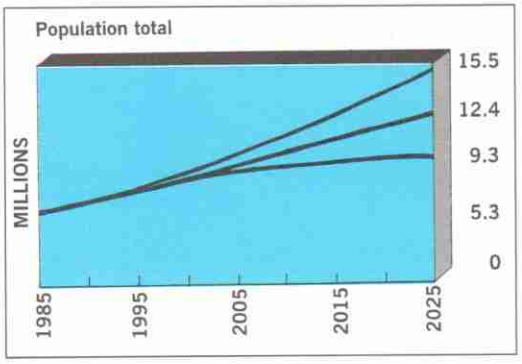
Although there are no figures to establish the number of women who are single head of households, it is apparent that higher number of working women in Haiti should not be interpreted as a positive trait but rather as a necessity of life if women and their children are to survive without male support. ■

JENNY MATTHEWS



Cité Soleil (Sun City) shantytown on land near the capital that is irreversibly damaged and infiltrated by seawater.

high during the last two decades. If the trend continues, its population could double in the next 24 years. Guengant, who is based at the ORSTOM Institute in Guadeloupe, predicts that "population pressure from within Haiti will keep mounting". Given the current mood towards newcomers in countries that traditionally welcomed immi-



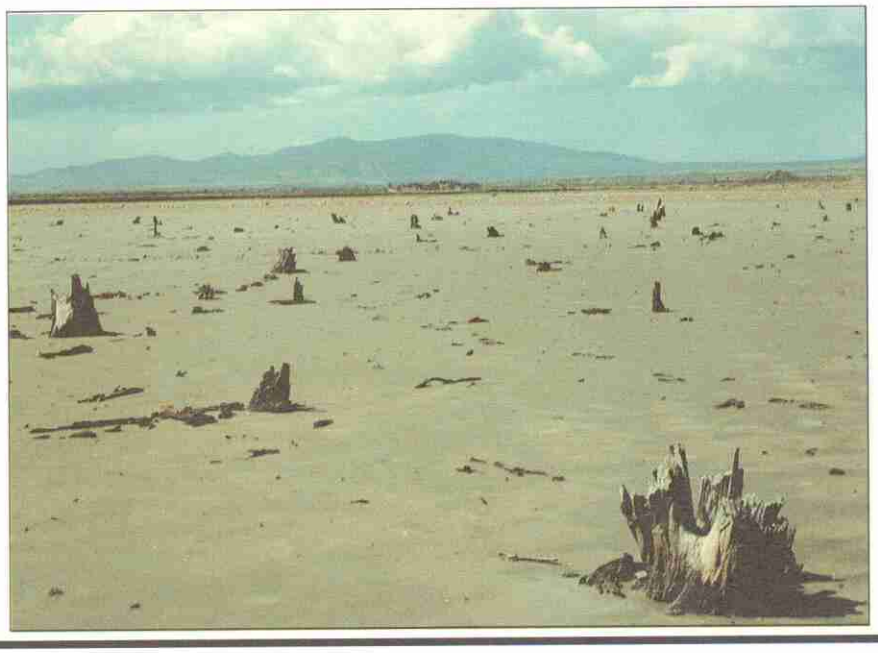
Source: Futures Group

Alternative projections for Haiti's future population growth.

grants or even tolerated a certain level of undocumented aliens, Guengant's views acquire additional validity. He added that "it is difficult to envisage a possible open and receptive destination for a massive flow of migrants from Haiti equivalent to those open to Europeans moving to the New World late last century to the 1920s."

For the smaller nations in the Caribbean the prospect of a continued Haitian immigration flow is unsettling. Faced with serious problems of their own, the reluctance to accept greater number of Haitians is not political, racial or even based on environmental concerns but related to each country's ability to cope with the burden of providing employment, social services and the protection of the law to a culturally different people. Nowhere is this more evident than in neighbouring Dominican Republic.

Magaly Caram, the Executive Director of PROFAMILIA Dominicana, views the issues affecting the quality of life in Haiti as similar to those of the Dominican population. Furthermore, the 13.9 million people who share this insular ecosystem of 76,000 km^2 and their problems cannot be kept totally separated with a politi-



Below left: *Desertified area left by felling a mangrove forest.*
Below right: *Topsoil washed out to sea following erosion caused by deforestation.*

ALL PICTURES: STILL PICTURES/MARK EDWARDS

cal frontier. The plight of Haitian migrant workers in the Dominican sugar cane plantations speak of both the porous borders and are related to quality of life in both countries.

Serge Pintro, Caram's counterpart in Haiti, is the Executive Director of the Haitian Family Planning Association (PROFAMIL) and also sees the similarities but is very concerned about the advanced degree of deterioration in the quality of life in Haiti. He looks at the degradation of the urban environment in Port-au-Prince, directly caused by the destruction of the rural environment, as a sort of cascade effect that ultimately will affect the whole country.

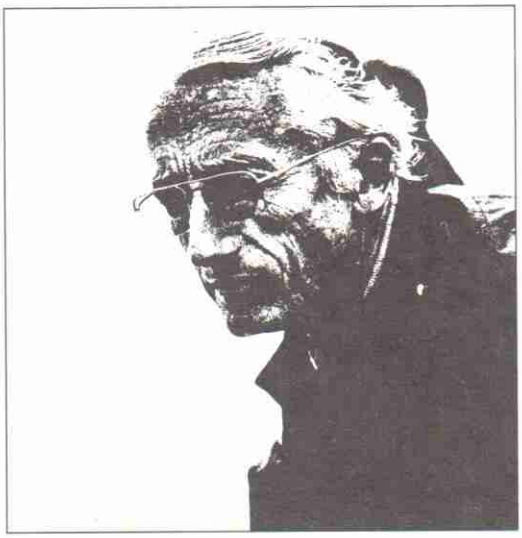
Since more than one-third of Haiti's territory has become totally unfit for human survival, the ensuing process of urban migration has created several urban nightmares. Cite Soleil, on the Bay of Port-au-Prince, is one of the worst slum areas in the world. Deemed Haiti's own Calcutta, the borough already has an extremely high population density of 25,000 people/km^2. The physical site of the slum is in itself an ecological irreversible area. Its soil which is virtually unable to support any vegetation due to the infiltration of sea water, is a symbol of one of the most serious impending disasters in Haiti. The management of the borough's human waste, the provision of water and overall public health conditions confirm a quality of life that is below any standards of human dignity.

Helena Pierre is a sugar merchant and long time resident of Cite Soleil. Her business grosses no more than $40 a month. She is also a grandmother and head of a household and must take care of the orphans left behind by her daughter who died of pregnancy related causes. She speaks of charcoal, water, sugar and the health of her daughter as central to her life experience. Obviously, she has the entrepreneurship it takes to survive but she does not have any chance for the empowerment needed to provide a better future for both her and her grandchildren. The lack of family planning deprived her daughter of any

Cousteau on Haiti

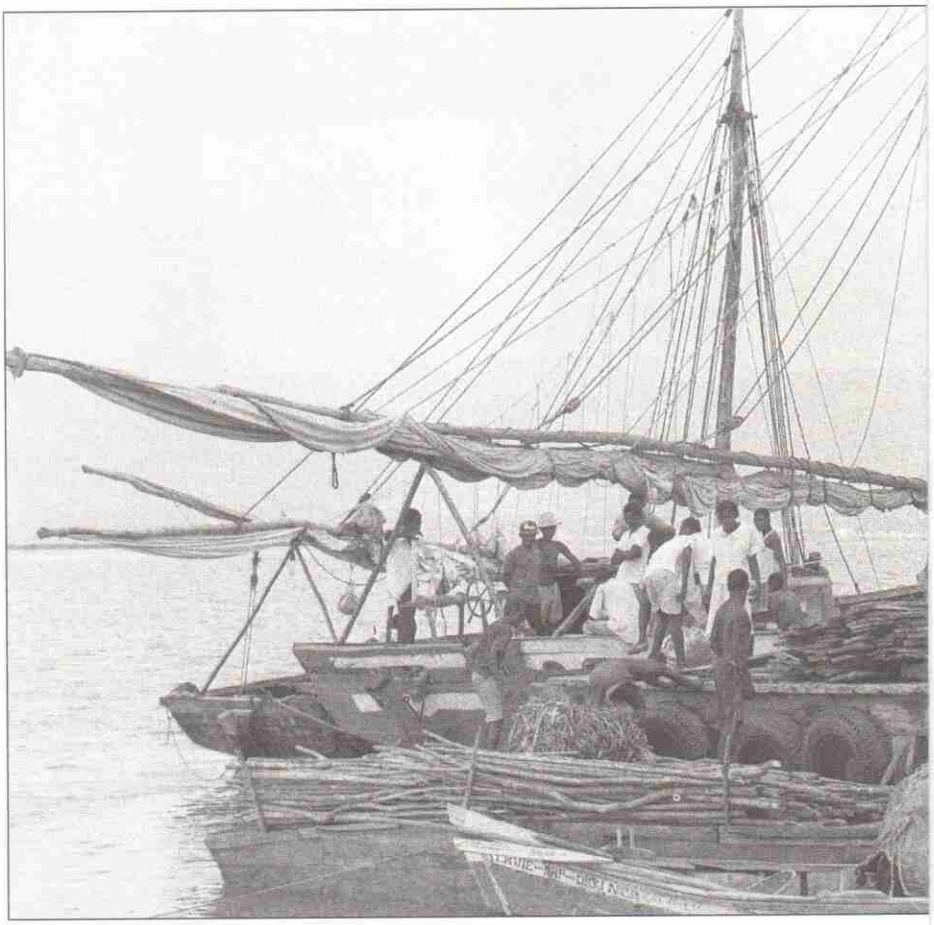
I have had the opportunity, throughout 59 years of worldwide explorations, to witness and study two striking examples of ill-fated communities: Haiti and Easter Island, both victims of distressing ecological tragedies of our time. Easter Island experienced the same uncontrolled development, which ended after 1,000 years of mishaps in the collapse of an original culture and the physical eradication of the islanders.

Haiti is terribly overpopulated: 7.5 million people on an exiguous and impoverished land. Six children per family, but fathers of eleven are not rare. High infant death rate, insufficient schooling, and misery due to ignorance, superstition and poor political management. Haitians, though, are beautiful, proud, intelligent, good-humoured, and hardworking. But they have exhausted the marine resources of their narrow continental shelf. They have deforested, without precaution, two-thirds of their country and tropical rains have thereafter wiped out the soil, laying bare the ground rock and impeding agriculture for centuries to come. To cook their scanty meals, they continue to deforest, and turn wood into charcoal. We asked: "What will you do when there is no wood left at all?" "That will be the end of the world! Yes, the end of the world!" they answered. Until then, the men of Haiti procreate, hoping that their male children will take care of their old fathers; and the women say, "I am not the one to decide how many children I will have."



Political changes will fail to resolve Haiti's tragedy, as this country will be poverty-stricken for many years. Maybe forever, because in certain cases environmental destruction may reach a point of no return. ■

From an address by Captain Jacques-Yves Cousteau to the UN Conference on Environment and Development (UNCED) in Rio, earlier this year.



The blight of poverty

The environment of Haiti is an environment under siege from poverty and overpopulation. In 1986, an ecological survey showed that 35 per cent of the national territory was uninhabitable, mainly because of erosion and salinization, and by now the proportion is probably 40 per cent, according to Pierre Chauvet, of the Fédération des Amis de la Nature (FAN).

As a result, there is a concentration of people in habitable areas, leading to massive urban immigration, with tension and appalling living conditions.

The main ecological problems are caused by deforestation. Seventy per cent of the country's energy requirements are met from wood and charcoal – and pressure for fuelwood has increased since the trade embargo prevented the import of butane and propane. Some 40–50 million trees are felled every year for fuelwood and

future at all. There are probably hundreds of thousands of stories like hers.

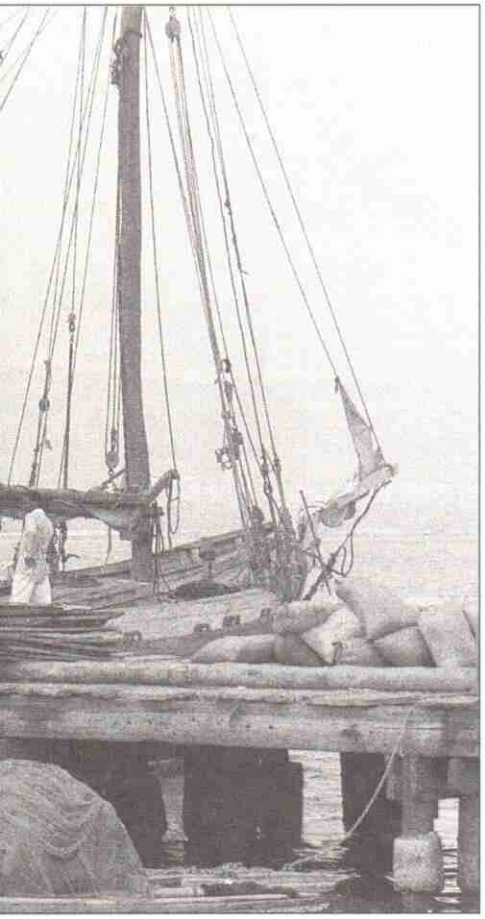
"Helena's daughter could perhaps have been saved, if she had access to contraceptives," agrees Mrs. X, one of IPPF/WHR's 'Mystery Client' workers within the Private Sector Family Planning Project. Mrs X goes to clinic after clinic to ensure that the quality of care is upheld. But the job is not always easy. The Contraceptive Prevalence Rate, at 10 per cent, is amongst the lowest in the Americas. Although people know about family planning, the unmet demand for contraception is staggering.

The people of Cité Soleil are not fictional characters frozen in the time frame of a theatre play. They are real and speak about the future, although for them, time and future may have a different meaning altogether. The existence of an organized local soccer league proves that despite the anguish of urban despair, the young of Haiti are vibrant and enjoy sports.

The league's members are male, young and relatively educated, but nevertheless very poor. They know about family planning and the environment and they have views on the future as stated by Andou Evel, a member of the league's steering committee, "Water is life, burning wood is the opposite of life... Family planning is a choice for the future but the real future for us may be outside the country." The mood of the group is up-beat but nevertheless, the underlying lack of empowerment is evident.

On the other side of town, in his private business office across from the

COUSTEAU SOCIETY



cropland – and the forests are now running out: they are now estimated to cover less than 1 per cent of the total territory of 27,000 km^2. The process is described by FAN as "burning soil".

There have been plenty of trees planted in recent years – some 20 million annually, at a cost of $20-30 million of largely USAID funding – but only 2-3 million actually survive each year, according to M. Chauvet. The reason, he says, is that the peasants are not adequately involved in planning and cannot afford the capital investment in time and money necessary for tree planting. With no security of tenure, they prefer to concentrate on short-term crops, such as sorghum and maize, and when these exhaust the soil after three or four years, they move on and cut more forest.

The coasts and surrounding sea are damaged by overfishing, the cutting of mangroves for charcoal and the destruction of coral by eroded mud and destructive fishing techniques. Even the mountains are disfigured by uncontrolled quarrying for sand for the construction industry.

Rainfall is high in Haiti – but deforestation means that most of the rain just runs off into the sea. As a result of this process and over-pumping, groundwater levels are falling and the water itself is increasingly salinated in areas near the sea.

One important initiative supported by FAN is the provision of 3,000-gallon water tanks for smallholders, which can be kept filled throughout most of the year by the frequent rainfall. A reliable water supply saves women and children spending up to five hours a day walking down to water sources and back up again; it enables the children to go to school and the peasants to keep more animals. The Federation is also helping farmers to build terraces supported by dry stone walls, to halt erosion on the steep hillsides.

High population growth is closely linked to Haiti's environmental plight and its future, maintains Pierre Chauvet. "One solution will inevitably be further emigration", he says. "But it must be *planned* emigration, not just desperate people putting to sea in open boats."

Experience has also shown that once impoverished people have an alternative source of income, the need to destroy the environment in order to survive diminishes, he maintains. ■

Jeremy Hamand

presidential palace, Pierre Chauvet is one of those who feel the power to act. As a founding member of the Federation des Amis de la Nature (FAN), he recalls that right after a decree had been enacted in 1983 to protect pine forest in the south of the country, creating the National Park Reserve of Morne Macaya, the largest pines of this important ecological reserve were being felled by members of Baby Doc's family.

Today, the fate of the Park is even in greater jeopardy. The one year old trade embargo imposed by the international community to accelerate the resolution of Haiti's internal political problems, has further damaged the forested mountainous slopes. With the suspension of USAID assistance and without any worthwhile official enforcement of protective measures, several sections of the park have been affected, and the mountains show increasing balding patches.

This story was put together at the Montana Hotel, a comfortable enclave in one of the few forested hills still visible around Port-au-Prince. In its lusciously planted gardens one can hear the international development crowd exchanging programme management notes and anecdotes in which the Haitian expression which is almost a cry from all over Haiti... SE PA FOT MWEN! It is not my fault! is often embodied.

But, whose fault is it anyway? Who must assume the responsibility and the leadership to solve Haiti's inextricably linked population, developmental and environmental problems? Is there any hope?

The answers to all those questions are anywhere we can find traces of Haiti's mahogany and her people. The environmental degradation of Haiti was started by the North. The lessons of history should not be ignored. The past must be understood and taken into account in the design and implementation of the solutions for the future. Haiti must be unequivocally helped from outside.

The Haitians also must realize that the key to their survival is within themselves, not in those who will provide the funding. The problems are not partisan issues but the solutions must be worked out in the socio-political reality of the country. Haiti has to undergo a national change of attitude so that everyone assumes responsibility. At the individual level, each child must be a wanted child; at the collective level, society must think only in terms of sustainable development with a sense of urgency second to no other consideration.

The International Community has its own share of responsibility in supporting the process if not out of a sense of justice and reparation, at least as a recognition that a vast majority of the Haitians, ultimately ecological migrants, will have to leave their environment once it has become irreversibly unable to sustain human life. ■

Francisco Di Blasi is Senior Programme Adviser in the IPPF Western Hemisphere Regional Office, New York.

Left: *The current trade embargo has increased the pressure on the remaining forest cover because of the shortage of bottled gas.*
Below: *Rural life is a constant battle for fuel, water and food.*

PIERRE CHAUVET

JENNY MATTHEWS

World Bank challenge

Dr Thomas Merrick, a distinguished US demographer, has taken up an important appointment as Senior Population Adviser to the World Bank. Here *Winthrop P. Carty* gives a personal view of the problems and pressures that will face him.

On the surface, it appears so seamless: on September 1, 1992, a leading US demographer, Thomas W. Merrick, took over the key position of Senior Population Adviser at the World Bank.

Although some might prefer a woman or Third World citizen, Merrick's qualifications for the Bank's top population post cannot be denied. The vigorous 53-year-old former Georgetown University professor was, at the time of his appointment, the President of the respected Population Reference Bureau (PRB).

Merrick's considerable international experience includes stints as a Ford Foundation representative in Brazil and a population specialist at the US Agency for International Development (USAID) in Washington. He has lectured in a variety of less developed countries for the World Bank and the United Nations, written extensively on demographic issues and is widely known in the population community.

For its part, the World Bank has a relatively new President, Lewis Preston, who seems anxious to upgrade his institution's population programme. Last fiscal year the Bank spent an estimated $360 million on population projects to surpass USAID, traditionally the world's largest donor.

But, ironically, it very much remains to be seen what difference Merrick can make at the Bank. The institution, formally called the International Bank for Reconstruction and Development (IBRD), has long been a graveyard for family planners' high hopes.

Founded in 1945 to meet the needs of post-war European reconstruction, the IBRD was dominated by tight-fisted US bankers who felt, not without reason, that the fledgling institution had to be most conservatively managed to permit it to borrow on the open money market. Social investment, such as family planning, simply wasn't deemed bankable.

After the Bank moved from European reconstruction to Third World development, President Robert McNamara in 1968 told his board that rapid population increase had "a crippling effect" on economic growth. By 1977, McNamara had to admit, "Too many of us in the Bank had proceeded as if population issues could be left to specialists, rather than considered automatically in all aspects of our investment and development programmes."

More recently, Dr Fred Sai, the august Ghanaian President of the International Planned Parenthood Federation, was the Senior Population Adviser. But his calls for family planning action were not given high priority. Dr Sai's immediate successor, Dr Steven Sinding, a former USAID official, offered a bold plan of action, saw his proposal rejected, and then opted out of the Bank within a year.

Over the past 20 years, the top echelon of the World Bank has increasingly recognized the relationship of population growth to economic development. But three factors – the staff's inability to relate to demographic issues, the sideline status of the IBRD's understaffed and dispersed population division, and the resistance of client nations to family planning projects – conspire to blunt the best of intentions.

The bank staff is an elite group. Bank employees, far more than other official multinational institutions, are appointed on merit. Predictably, the Bank is dominated by economists, who are asked to prove the bankability and technical soundness of every investment. In response, World Bank officials have developed highly sophisticated economic models and criteria with which to judge proposed projects.

Moreover, IBRD's mystique, in large measure, is derived from Europe's economic and social recovery, based on infrastructure investments that were ably carried out by the recipients themselves. To this day, Bank economists favour carefully designed infrastructure projects.

The World Bank, which doesn't maintain a substantial staff in the field, is poorly adapted to cope with the vagaries of Third World social projects that call for building up indigenous human resources, hands-on direction and novel strategies.

Last year an internal document reviewed the Bank's population activities in eight countries. Some observations made about the Indonesian case study apply widely:

"In contrast to USAID and UNFPA, the Bank typically delegates little decision-making authority to the field and has limited field representation... Since it operates at arm's length, Bank staff feel more comfortable with components like construction which require few changes after the design stage has been completed, as opposed to components like training or IEC where learning by doing and adapting as one goes along is more important. Also, it is much easier to develop large projects by focusing on construction."

Finally, various observers have long noted that the Bank tends to work with recipient officials who don't give high priority to borrowing for family planning. By mandate the Bank must work through Government channels. Most developing country officials, besieged by short-range social and economic problems, prefer showcase projects that have an immediate pay-off in jobs and visibility. Bank economists, for their part, are reluctant and often ill-equipped to suggest socially sensitive population policies to their LDC counterparts.

A new complicating factor was observed at the UN Conference on Environment and Development (UNCED) in Rio de Janeiro. Radical feminists at the meeting assaulted foreign-funded projects as a mechanistic attempt to control population growth at the expense of women. Women, it was variously claimed, were unnecessarily sterilized, received precious little medical attention and informa-

tion, and were not a party to the design and implementation of family planning programmes.

Much of the anger aired in Rio de Janeiro stemmed from the particularities of the recently concluded military dictatorship in Brazil. And the emotional blanket indictment, largely issued by educated, upper class LDC women, lacked affirmative consideration of how a poor woman is to find access to family planning.

There is enough truth to the feminists' complaints, however, to oblige international family planning organizations to review their operations. As the LDC feminist movement grows, so may its ability to challenge foreign-supported operations in their respective countries.

Given the Bank's institutional ambivalence on population issues, how effective can Merrick be? He recognizes that his make-or-break priority will be to convince the Bank's sceptical economists that population has direct relevance to their work.

Merrick says he will espouse population strategies that "are carefully crafted" to fit the World Bank's operations and culture. Rather than make "generic arguments which don't work," he adds, he will argue the importance of population activities on a country- and issue-specific basis.

He plans to stress population and family planning policies' bearing on capital formation, health, education, environment, job-creation, urban development and other specific Bank sectors. To make his strategy credible, the new Senior Population Adviser must build up the number and competence of the World Bank's bureaucratically dispersed demographic staff.

Notwithstanding his intellectual authority, wide experience and diplomatic skills, Thomas Merrick will have his hands full just making necessary changes of personnel and thinking at the Bank, not to mention in the rest of the world. ■

Winthrop P. Carty is Co-ordinating Editor of Global Edition.

We must spend more

by Thomas W. Merrick

Two decades of experience has shown that population programmes have stimulated and accelerated fertility declines in developing countries. They have lowered population growth rates and improved development prospects.

The need now is to make sure the resources are provided to finish what has been so effectively started.

This is especially important in the 1990s when, paradoxically, declining population growth rates are being accompanied by enormous annual increases in the number of people.

More than 80 million people are now being added each year in developing countries; this number will surpass 90 million later in this decade, increasing the world's developing country population by a country almost the size of Nigeria each year. After 2000, if fertility declines can be sustained, the number added each year will slowly taper off.

The reason for such a large absolute increase is demographic momentum. Children born during periods of high fertility are now reaching reproductive age. Though individual women are having fewer children on average than their mothers, there are simply more women having children.

No one expects population growth in developing countries to continue indefinitely. Most experts expect that rates will stabilize some time during the next century. When they will stabilize and how large they will be when that happens is difficult to ascertain: it depends on the pace of fertility decline, not to mention catastrophic events (wars, famines, environmental disasters, AIDS and similar epidemics) that could raise mortality.

During the 1990s the challenge of keeping up with demand is going to be particularly acute. During the 1970s, the number of reproductive age women in unions in developing countries (excluding China, which is so large that it distorts the picture for other areas) increased by 31 per cent, or 96 million women.

- During the 1970s, the number using contraceptives increased by 242 per cent (76 million women), bringing an impressive increase in the average contraceptive prevalence rate from 17 to 32 per cent of eligible couples.
- During the 1980s, the number of women in these age groups increased by another 31 per cent (with a larger population base, the absolute growth was over 120 million) and the number of users by 75 per cent (a lower percentage increase than during the 1970s, but still with an impressive 98 million more users). Contraceptive prevalence increased to 43 per cent.
- During the 1990s, another 31 per cent increase in the number of reproductive age women is projected. In this decade, that means an absolute increase of 150 million women. To maintain fertility declines, an additional 120 million women need to be given access to family planning in developing countries.

The annual number of births in developing countries (again excluding China, which had about 23 million births in 1988) increased from 75 million in 1970 to 88 million in 1980, and now exceeds 100 million. The number will reach 113 million by the end of this decade. After that the number will decline provided that the pace of present reductions in fertility rates is maintained; if not, the number of births will increase, and the force of momentum continues.

The need is not for a shift of priorities but effective and adequately funded programme strategies that

- recognize current demographic realities and mobilize adequate resources from official and non-governmental sources
- take advantage of the careful assessments that have been done to show what it takes to sustain programmes during this decade, such as involving the private sector more heavily in the effort, and
- apply lessons that have been learned about how to improve efficiency and management of programmes by linking them to reform of the health sector and other human resource initiatives. ■

Pie-in-the-sky?

Population projections are the stock in trade of demographers. They project that by such-and-such a time we shall have so-and-so many people on Earth. But there is strong evidence that the Earth is straining to support its present total. So how much credence should we accord to projections?

Of course demographers can protest that projections are not predictions, still less are they forecasts. They are simply extrapolations of recent trends in population growth, taking account of fertility levels, age structures and the like – also of socio-economic factors that influence people's views of how many children they would like. What they do not take account of are environmental determinants – and these are becoming all the more determining. What prospect, then, that we should revise our ideas about our demographic future?

Certainly the future is not promising. The latest United Nations calculations propose that today's total of 5.5 billion people will increase by more than half as much again by 2025, before finally levelling out at 11.6 billion by 2150. Of the projected increase till 2025, 95 per cent will occur in developing nations.

To emphasize the central point, projections are made in an 'environmental vacuum'. They ignore the natural-resource stocks – soils, vegetation, water, atmosphere and climate – that ultimately underpin all economies. Yet there are signs on all sides that we are over-taxing this essential ingredient in our future. The more ominous omens are known well enough. Consider a less familiar one. According to Peter Vitousek and his colleagues at Stanford University, humans are now co-opting – consuming, exploiting or wasting – a full 40 per cent of Earth's annual plant growth on land. This is much more than chopping down forests or burning up savannahs. We are effectively biting off huge mouthfuls of vegetation right around the world. Given present costs of this gluttony, how could anyone suppose that twice as many people (as are projected a few decades down the line) could regale themselves with 80 per cent of plant growth? One does not have to be an ecologist, just common-sensical, to see that would be simply not on the cards.

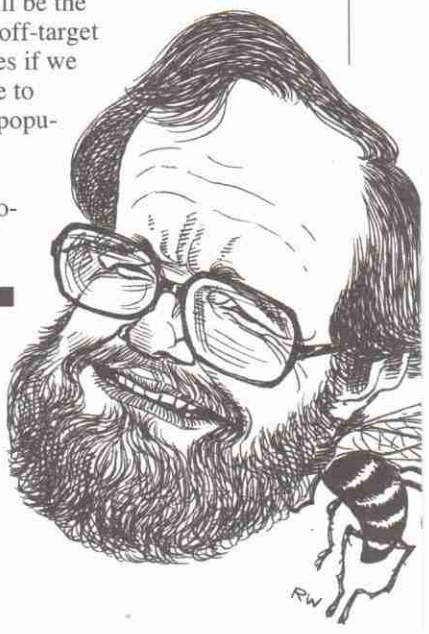
This brings up the key concept of carrying capacity. How many people can Earth sustainably support? According to the World Hunger Project at the University of Rhode Island, the planetary ecosystem could, with present agrotechnologies and with equal distribution of food supplies, *sustainably* support no more than 5.5 billion people even if they all lived off a vegetarian diet (and all croplands were used for food rather than coffee or cotton, plus food was equally distributed worldwide). Yet the global population is already 5.5 billion. If humans derived 15 per cent of their calories from animal products, as do many people in South America, the supportable total would decline to 3.7 billion. If they gained 25 per cent of their calories from animal protein, as is the case with most people in North America, the Earth could support only 2.8 billion people.

The region where these caveats apply most is sub-Saharan Africa. Its present total of 500 million people is projected to increase four times over before achieving zero growth in the 22nd century. Yet its people are poorer today than in 1970 and hungrier than in 1960 – and the region is undergoing widespread degradation of its environments, notably its farmlands. It has abundant natural resources, so with sufficient outside support it could still pull through. But along the way, and for several decades to come, there will surely be problems aplenty.

On humanitarian grounds alone, we must hope that a downside scenario will not come to pass. If, however, and as increasing observers believe, the region endures travails without relief, its eventual population could turn out to be well below the projected 2 billion. Remarkably, Aids will not make much difference. According to Dr John Bongaarts of the Population Council, even if the scourge continues its present stranglehold, it will reduce population growth by only one per cent or so region-wide, albeit with some individual nations harder hit.

In all this, time is of the essence. Just a one-decade delay in achieving the family-planning goals established for the 1990s could make an eventual difference of 4 billion extra people in global population. In the particular case of Pakistan, with 115 million people in 1990, achieving replacement-level fertility by 2010 instead of the predicted 2035 would reduce the eventual population size by 222 million. Note too a country that has displayed due sense of urgency as concerns population planning and with handsome pay-off, Thailand. In 1969 the fertility rate was 6.5, dropping to 3.2 in 1978, 2.3 in 1984 and 2.1 in 1989. Had the government not implemented its National Family Planning Programme, the 1989 population would have been 67 million rather than 54 million.

The bottom line in all this is that demographic projections need to be made more realistic by incorporating the environmental dimension. This would help planning all round, and would serve to highlight those regions where needs are greatest – and where there will be the biggest off-target outcomes if we continue to project population growth in demographic terms alone. ■



Norman Myers is a Worldwide Fund for Nature gold medallist, author and consultant on environmental issues.

FILMS

Opening the can of worms

by Jenny Richards

For over three years at TVE* we've agonized over how best to approach a film about population. "Don't even try it – it's a can of worms," an aid agency colleague kept telling us. "*Any* film will just polarize the debate again. You'll just provide more ammunition for all the extremists who say overpopulation is the number one environmental problem facing us – when it isn't."

Fortunately, there are still some intrepid producers prepared to enter the minefield – and this year there are four new British films on population issues that extend the debate. All of them go to great lengths to avoid partisan positions and take up instead a holistic approach to explore the interaction between population, resources, consumption and the environment.

The first, the enigmatically-titled *Sex, Lemurs and Holes in the Sky* (52 minutes), comes from a now honourable line of documentaries on environmental issues from Central Television's award-winning duo Lawrence Moore and Robbie Stamp (earlier films are the Prix Italia winner *Can Polar Bears Tread Water?* on global warming; *When the Bough Breaks* on children and the environment; and *Top Guns & Toxic Whales* on environmental security). All these films have made striking use of the kind of visual pyrotechnics more usually associated with rock videos – state-of-the-art visuals, split screen images, computer graphics. The aim is to present sophisticated arguments in a popular form to reach out to the kind of mass audiences that don't usually watch environmental programmes. This latest film – a co-production between Central TV, TVE and the National Audubon Society in the USA, with author Paul Harrison as film consultant – is no exception.

INES CAVILL

A fishing family in Kerala, featured in Sex, Lemurs and Holes in the Sky.

Sex, Lemurs and Holes in the Sky opens with a montage celebrating the achievements of the human species around the world. But it is our very success *as* a species, the film points out, that is now threatening the existence of other species on the planet. Graphs illustrate the speeding up of world population growth from 1850 to 1990, and the UN estimate of projected doubling again to 10.5 billion by 2060. To its own blunt interjection 'SO WHAT?' the film explains that the crisis we are facing is not just about numbers – which are meaningless in isolation – but about the impact we as humans have on our environment.

The film's thesis is that we use the environment as both a source for food, shelter and raw materials, and a sink to dispose of our wastes. So the impact we have on the environment derives from a combination of three factors: how much each of us consumes, the technology we use to extract and process resources as well as getting rid of the waste, and the numbers of us who have this impact, day in, day out.

To illustrate this, producers Moore and Stamp contrast the lifestyles of two families on two very different islands: Madagascar and Manhattan. Michael and Sarah Weeks are musicians, living on Manhattan's Upper West Side with their two children. Soson, a farmer, and his wife Etody live with their six surviving children (two others died) in a village near the Ranomafana rainforest in south eastern Madagascar.

Michael and Sarah are not the mindless products of US consumer culture, but sympathetic, articulate individuals who discuss their responsibilities as parents, as consumers, as citizens. But for all their ecological awareness, their recycling and their commitment to teaching their children about other species, other cultures, the contradictions of their Western lifestyle remain. Developed countries, the film points out, consume over two-thirds of the world's natural resources, and in an average lifetime an American will waste 30 times more resources than a

*Television Trust for the Environment, 46 Charlotte Street, London W1P 1LX. TVE was set up in 1984 by the UN Environment Programme (UNEP) and Central TV to promote films and programmes on environment and development issues on broadcast television. The *Moving Pictures* service was started in 1987 to provide high-quality films and videos to TV stations in the Less Developed Countries. To date, TVE has distributed over 12,000 videos to TV stations and NGOs in over 70 countries in the developing world and former Eastern Bloc.

Madagascan.

Faced with the bewildering range of goods in her local supermarket, Sarah reflects on their impact. "I know we use a lot of things from other places, and there are so many of us, we use a lot of stuff...Everything is available here, you can get everything." Watching through her apartment windows as the garbage trucks remove the trash, she ponders how easy it is in a city like New York "not to see what you're disposing of in terms of waste".

Revealingly, there is no word for waste in Madagascar. Every natural resource is put to good use. Instead the dilemma facing the island is one of massive population growth. With an average family size of six or more children, today's population of 12 million is set to almost triple in 20 years time. Needing more space to grow food to feed their families, farmers are forced to cut down the forests and cultivate virgin land. At current rates of destruction Madagascar's forest will have disappeared in 35 years – and with it will disappear the 28 species of lemur who live there.

Etody has been advised by a doctor not to have more children, but she has never heard of contraceptives and does not know how to stop. The nearest medical facility she *could* visit is 20 miles away in the town of Ranomafana – a day and a half's walk. At the Ranomafana clinic, Dr Merciel explains that there are three major drawbacks to introducing family planning to more Madagascans. Men, he says, are not well educated and want large families; and the clinics do not have the means to provide family planning in any case. The result is the vicious circle of poverty, high infant mortality rates, poor health care, population growth and environmental destruction which is now familiar throughout the developing world.

The prescription that *Sex, Lemurs and Holes in the Sky* puts forward for the population dilemma is found in Kerala in southern India. Here the State's commitment to land, education and health care for all has allowed its people to enjoy literacy levels, life expectancy, access to integrated family planning and low infant mortality rates on a par with most industrialized countries. Family size has fallen from six or seven children to just two. Girls are as treasured as boys. And the young women who spearhead the literacy programmes display a new self-confidence reflected in their awareness of their rights and their achievements. "Family planning", claims Dr Rao, Assistant Director of the Family Planning Association of India, "is not merely sterilization or contraceptives. It exists to improve the quality of life, to empower and to enable people to have more time, more information."

Beth Holgate's BBC documentary *Too Many People* (40 minutes) presents an altogether bleaker view. Using a similar device to that employed in *Sex, Lemurs and Holes in the Sky*, the film contrasts the lives of Robert and Margaret McMillan and their two children, Charlotte and Alexander who live in London, and Khalek and Kulsum Bano who live in Bangladesh and have 11 surviving children (another two have died). The McMillan family sponsor Khalek and Kulsum's nine-year-old daughter Mukul, paying £12 a month through a charity and receiving progress reports in return – and letters and drawings from Mukul which Charlotte and Alexander cherish.

The money the McMillans provide allows Mukul to go to school, and also contributes toward the costs of the local health clinic. But it does not pay for food or the family's rent. Even after most of the elder children have left home, Kulsum and Khalek have difficulty making ends meet. After years of working in a tannery, Khalek's health is ruined and he can no longer work. The family can afford only one meal a day, and the film follows the parents' dreadful search to find a new home in the slums of Dhaka that is more affordable than their present one-room accommodation.

Just feeding her remaining family exhausts Kulsum. Asked why she had so many children in the first place, she replies that she married at the age of 15 and didn't know better. "I didn't know then what I know now. If my husband told me to do something, I did it. I was so simple." Now she regrets her ignorance. There are, she says, "too many people – not enough food and clothes. A day will come when children will say: 'Mother, we heard there used to be fish in the rivers. We have heard there used to be mango trees. Where are they now?' We will be chewing the bark from the trees like goats. You see, the people increase, their numbers grow, but the land does not."

But, like so many other Bangladeshi families, Kulsum and Khalak also believed that by raising a big family their children would support them in their old age. This, too, has been a bitter disappointment. Their eldest son, a rickshaw driver, is heavily in debt, and himself has two wives and five children. Unable to rely on him for food and rent, they have had instead to send their 11-year-old son Kamal out to work full-time in a garment factory. He works nine hours a day, earns £7 a month, and dreams of going to school.

In London, Robert McMillan readily admits that, while he makes the decisions about his business, it's his wife Margaret who makes decisions about the family. And for Margaret, the ability to choose the number of children she had was very important.

The film also casts a cruel spotlight on the motivation of donors like the McMillans. The £12 a week they pay toward Mukul is, Robert says, their way of: "putting something back into the pot of humanity". But making the film prompts them to consider just how much good their money does. Robert admits that it "could be almost unfair to sponsor a child – dangle a carrot, open a few more doors, and then bang! – the door's closed". An uncomfortable film.

Dr June Goodfield, the determined 65-year-old presenter of two 50-minute films entitled *The Cosmic Joke*, is used to confronting uncomfortable questions. For ten years she wrote about health problems in developing countries, and learned, she says, that fighting disease exacts a price – a population explosion. Her concern

came to a head when she watched the BBC drama *The March* in 1990, which showed thousands of migrants trying to escape from poverty, famine and drought in Africa and share in the prosperity of Europe. The experience forced her to consider whether – "as the old live longer and the young don't die, as human numbers soar and the resources of the earth shrink – preoccupation with our own survival has not set the stage for our own extinction? The American novelist John Steinbeck believed it had: he said it was a joke – of cosmic proportions."

This was the impetus for June Goodfield's own personal pilgrimage to discover whether the joke is really on us – humankind. "As human numbers explode, demand for food, water and energy could destroy the whole edifice of our planet. We are all part of one big problem – but is there one big answer?" she muses. "I suspected that it would all boil down to local solutions that would suit local people."

Her travels take her to Indonesia, Mexico, Morocco and Ghana in search of answers – in two ravishingly photographed, exquisitely crafted 50 minute documentary programmes produced and directed by Michael McIntyre from Antelope Productions. The greatest asset of both films is June Goodfield herself, with her unquenchable enthusiasm, her exasperation with human folly and greed, her endless inquisitiveness – and a memorable commentary which reveals the depth of her understanding and her compassion.

In Indonesia, she inspects village community health projects built up by the local authorities to improve the health of women and children and educate families about family planning, and visits a batik factory where you can buy dress lengths printed with contraceptive devices. In Mexico, she is an unlikely spectator at a talent contest where 14-year-old girls from the shantytowns mime provocatively to Madonna songs and then take part in discussion groups on adolescent sex.

In Morocco she gets on a mule to visit remote village communities and explore how Islam and family planning can co-exist in a country where

Dr June Goodfield in a Mexico City rubbish dump.

the population has jumped from 9 million to nearly 27 million since 1950. And in Ghana, she takes part in a family planning rally and explores the contradictions of a country where women do most of the work and occupy a dominant position in commerce but have little access to education and family planning methods. "I came to love the Ghanaians," sums up Goodfield. "Considering what they have to live with, their cheerfulness and stoical patience are awe-inspiring."

It's an attribute as easily applied to Goodfield herself. These films succeed in driving home to viewers the urgency with which she feels the population issue should be debated just because she is not afraid to express her disgust at the niggardly, complacent and bigoted attitudes currently displayed by so many of the rich industrialized countries. An example is one cathartic moment in Mexico City when Goodfield is stumping round a monstrous garbage dump. "A point came in Mexico," she admits, "when I finally began to get angry. I have travelled in many countries, but the gap here between rich and poor seemed to me to be as great as anywhere in the world. We may succeed in stabilizing the world's population, but it's likely to turn to ashes in our mouths if people's lives are not improved. If the Pope and his college of Cardinals lived on this garbage dump, would they be so certain of where the morality lies? I can't believe God meant us to have children if they're to live like this." More power to her elbow. ■

Jenny Richards is Television Trust for the Environment's Director of Programmes.

■ *Sex, Lemurs and Holes in the Sky*: available for sale from Central TV Enterprises, 43-45 Portman Square, London W1H 9FG. Telephone (4471) 486 6688. Broadcasters in developing countries can obtain the programme free of charge from TVE.

■ *Too Many People* is available from BBC Enterprises, 80 Wood Lane, London W12 0TT. Telephone: (4481) 743 5588; fax: 749 0538.

■ *The Cosmic Joke:* These two films together with Viewers Guide and teaching notes, are available for those who might wish to purchase them for *non-broadcast* use. Below are listed the appropriate organizations that are handling distribution:

Enquiries from the United Kingdom or Europe should be directed to: The Television Trust for the Environment (TVE), 46 Charlotte Street, London W1P 1LX. Telephone: (4471) 323-1376. Fax: 580-7780.

In the United States and Canada: Ambrose Video Publishing, Suite 2245, 1290 Avenue of the Americas, New York, NY 10104. Telephone: 212 265-8239. Fax: 212 265-8088. The American version of the films, to be broadcast early in 1993, will be available from approximately March 1993.

TVE are also distributing globally to Low Income and Eastern European countries, and will respond directly to any enquiries from these areas.

■ **A special issue of** *Moving Pictures Bulletin* **reviewing new and recent film and video productions on population is available from TVE, 46 Charlotte Street, London W1P 1LX. It includes an eight-page illustrated educational supplement on the subject by** *People & The Planet* **Contributing Editor, Paul Harrison.**

■ *Decade of Decision*, **a new 13-minute video narrated by Walter Cronkite, is available from the Population Crisis Committee. Produced for the 1992 Earth Summit in Rio, the video explores the relationships between population growth, poverty, consumption patterns, and mounting environmental damage. It calls for universal availability of good quality family planning services by the end of the decade in order to avoid a possible tripling of world population in the next century.**

News from our Associates

Population Council

Margaret Catley-Carlson, Canada's Deputy Minister for Health and Welfare since 1989, has been elected President of the Population Council. Ms Catley-Carlson, who will be the first woman and the first non-American to hold the post, succeeds George Zeidenstein on 1 January, 1993.

"The decade ahead offers extraordinary promise in bringing better family health, including fertility management, to substantially greater numbers of the world's families," says Ms Catley-Carlson. "The building blocks are available – fast and efficient communication, safe and effective contraceptives, proven delivery systems, and significant research advances in which the Population Council has played a remarkable role."

Ms Catley-Carlson is a past President of the Canadian International Development Agency (CIDA), and has been a trustee of the Population Council since mid-1990.

Briefing kit

The third edition of Population Issues Briefing Kit has been produced by the United Nations Population Fund (UNFPA). It follows the same format as the previous two editions, with information and figures updated as appropriate. For example, the first of the ten issues covered is population growth, and this section reflects the revised UN long-term projections which were issued in early 1992. "The 'medium variant' or most likely projection for 2100 is now 11.2 billion," the Briefing Kit says, "1 billion or 10 per cent larger than that predicted in the 1982 long-range projection". There is also a changed projection for the eventual stable world population, which the UN now puts at 11.6 billion in 2200, compared with its previous figure of 10.2 billion towards the end of the next century.

Another key issue is the environment, with a section entitled Balancing People and Resources. Over the last 45 years, 1.2 billion hectares, an area the size of China and India combined, have suffered moderate to extreme soil degradation, which represents 11 per cent of the Earth's vegetated surface, the report says. Out of 50 countries studied, however, those with lower population density have lost a much lower proportion of their original wildlife habitat.

■ *Write to: UNFPA, 220 East 42nd Street, New York, NY 10017, USA.*

Handy chartbook

The Population Crisis Committee's *Policymaker's Chartbook on World Population Issues* offers a wealth of facts and figures, laid out clearly with easy-to-follow graphs and tables. It should be of interest not only to policymakers but to others who want to have this kind of data at their fingertips.

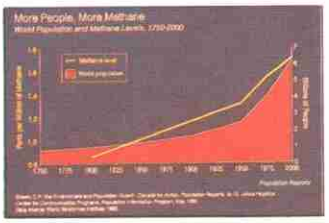
There are seven sections. The one on population trends includes historical and up-to-date information on growth, projections for the next century and urbanization patterns. The next, family planning programmes and their impact, shows recent changes in family size, and policies and expenditure on family planning. The third section covers use, failure rates, mortality risks and costs of methods of contraception, together with data on abortion. Further sections cover the impact of population growth on alleviating poverty and on the global environment, while the last section looks at trends in donor country support.

■ *Write to PCC, Suite 550, 1120 19th Street NW, Washington, DC 20036, USA.*

Informed choice

Informed choice is essential to quality of care and to achieving satisfied family planning clients. Studies from around the world have indicated that when people choose to use a family planning method, and that method is properly explained to them, they are more likely to follow instructions for its use and continue practising family planning over time.

To increase understanding of the importance of informed



choice, The Center for Communication Programs at Johns Hopkins School of Hygiene and Public Health has produced a slide show called *The Role of Informed Choice in Family Planning Programs*. It has been designed for family planning personnel, programme managers, policy makers and educational establishments, and the 68 slides with their accompanying narrative take 20 minutes to present.

There is also a booklet, *Informed Choice: Report of the Cooperating Agencies Task Force*, which reproduces the findings of the USAID-sponsored task force which consisted of representatives from 17 agencies working in international family planning – a number of them *People & the Planet* associates. The booklet is available in English, French and Spanish.

Post-partum contraception

Many women in the developing world would like to receive information about family planning when they have just had a baby, but do not receive it, according to recent research by the Association for Voluntary Surgical Contraception (AVSC).

In this 1991 study, researchers interviewed service providers and women who had just had a baby in hospital in six countries – Colombia, Dominican Republic, India, Kenya, Mali and Turkey. All agreed that during prenatal care, after birth before discharge and during post-partum visits were appropriate times for women to receive information on family planning. The researchers found, however, that fewer than four in 10 women actually received information then.

In India, for example, 97 per cent of women thought that after delivery and before discharge was a suitable time for getting information, but only 12 per cent had received any. Yet when women return home to remote rural areas, many of them `disappear' from the health care system.

The study, *Postpartum Contraception: Perspectives from Clients and Service Providers in Six Countries*, recommends that service providers should receive better training in counselling on family planning and on contraceptive methods, and that there should be special material and information available to answer the concerns of women who have just given birth, for example on the return of fecundity and the effects of contraception on breast-feeding.

■ *Write to AVSC, 79 Madison Avenue, New York, NY 10016, USA.*

New PRB president

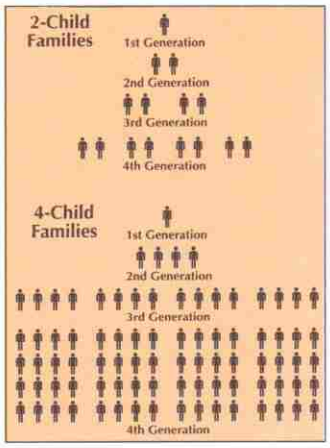
Barbara Boyle Torrey, Chief of the Center for International Research at the US Bureau of the Census since 1984, is the new President of the Population Reference Bureau. She succeeded Thomas Merrick, who has joined the World Bank as Senior Population Adviser.

Ms Torrey is on the Board of the National Academy of Sciences' Committee on Population, and has served as a consultant to the National Economic Commission, the OECD, and the Committee for Economic Development.

Environmental equations

The Environment and Population Growth: Decade for Action, the latest issue of *Population Reports*, traces the implications of population growth for agriculture, forests, water, oceans, minerals, energy supplies, and cities as well as global impacts.

Two special supplements



come with this issue: a poster, *The Environment and Population Growth: A Dangerous Trend*, and a wallchart. The wallchart provides extensive data on population-related environmental issues such as commercial energy use per capita and people without safe drinking water; it also contains environment-related population data, such as total fertility rates and contraceptive prevalence rates in developing countries, as well as the average of these rates in the developed world.

■ *Copies of the set of materials are available free to individuals and organizations in developing countries and for US$2 in US currency per copy for all others. Send orders for* Population Reports, *Series M, No 10, to: Population Information Program, The Johns Hopkins University, 527 St Paul Place, Baltimore, MD 21202, USA.*

New reports from PRB

The Population Reference Bureau has published two new reports for policymakers. *Africa Demographic and Health Surveys: Chartbook* (in English and French) uses Demographic and Health Surveys (DHS) data to highlight the population situation in Sub-Saharan Africa.

Fertility and Family Planning in Latin America: Challenges of the 1990s (in English and Spanish) contends that recent and rapid acceptance of family planning is fast replacing Latin America's tradition of large families. Nonetheless, major challenges remain to ensure that Latin American women have access to the high quality family services they want.

These reports are free to readers in less developed countries and other organizations or individuals working there.

■ *Write to International Programs, Population Reference Bureau, Inc., 1875 Connecticut Avenue, NW, Suite 520, Washington, DC 20009, USA.*

Teachers' pack

A *DIY Earth Summit Pack*, addressing the issues on the UNCED agenda, has been produced by Population Concern, in collaboration with the UK Centre for Education in World Citizenship and Worldaware. This educational pack contains information and activities which promote understanding of the world's population, environmental and developmental problems. It also encourages users to apply what they have learned to everyday life.

An organizer's booklet introduces the issues, suggests ways of bringing them to life with group activities and provides a guide to running your own "Mini Earth Summit". There are also 11 background information and activity sheets to photocopy.

■ *For a copy, please send a cheque for £6.00 or US$12 made payable to Population Concern, 231 Tottenham Court Road, London W1P 9AE, England.*

Audubon Video

Finding the Balance: Efforts Toward a Stable Population and Sustainable Planet, a video produced by the National Audubon Society's Population Program, looks at the efforts of people who are dealing first-hand with the issues of population growth and consumption of natural resources.

"These stories of individual actions show what happens when people take charge of a problem," says Patricia Waak, Director of Audubon's Population Program and Executive Producer of the video.

Finding the Balance stories were filmed in San José, Costa Rica; Austin, Texas; Arcata, California; and Gibbon, Nebraska.

■ *Copies of the video, accompanied by "Why Population Matters: A Guide for the Environmental Activist", published by Audubon and Population Crisis Committee, are available for US$25. Write to National Audubon Society, Population Program, 666 Pennsylvania Avenue, SE, Washington, DC 20003, USA.*

World in balance

To mark World Population Day 1992, UNFPA produced a 21-minute video entitled *Towards a World in Balance*. Based on the 1992 *State of the World Population report*, the programme addresses the relationship between population and sustainable development with footage from Costa Rica, Nigeria, Egypt and Indonesia. Available in English, French and Spanish versions from UN Information Centres or UNFPA offices around the world. ■

Call for Abstracts and Registration

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KEY DATES

January 30	1993:	Last date for receiving abstracts.
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March 30	1993:	Last date for receiving the full papers.

Please send your abstract - no more than 500 words- & requests for further information -- to S. Kinzett,
British Chairman
Sir David Owen Population Centre
PO Box 924, University of Wales,
Guest Building, Colum Drive
Cardiff CF1 3UY, UK.

Tel: (0222) 874833
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BOOKS

Consumerism and conservation

How Much is Enough?
Alan Durning
W. W. Norton, New York and Earthscan, London, 1992 $19.95 (hard cover)/$8.95 (paper) (USA); £8.95 (paper) (UK)

Global Biodiversity
Compiled by World Conservation Monitoring Centre
Chapman & Hall, London & New York, £29.95

Consumerism has not delivered the sort of happiness that it promised. Instead it has become the biggest threat to the globe, and we must move beyond it if we are to survive.

This is the central thesis of Alan Durning's book, an expansion of an earlier Worldwatch Paper. The book is rich in the kind of telling examples of crazy overconsumption that Worldwatch Institute is well known for: the 7.5 million TV sets or the 140 million cubic metres of peanut-shaped styrofoam packaging that Americans discard every year; the ecological absurdity of fattening Dutch livestock on palm-kernel cakes and cassava chips from deforested areas in Malaysia and Thailand.

But it goes much further, looking at the social failings of the 'affluent society'. Family and community links disintegrate. The 'pace of life' accelerates literally – research has found that people in industrialized societies actually walk and talk faster. The pay-off in increased leisure never seems to materialize. Surveys on self-rated happiness show no improvement in wealthy societies.

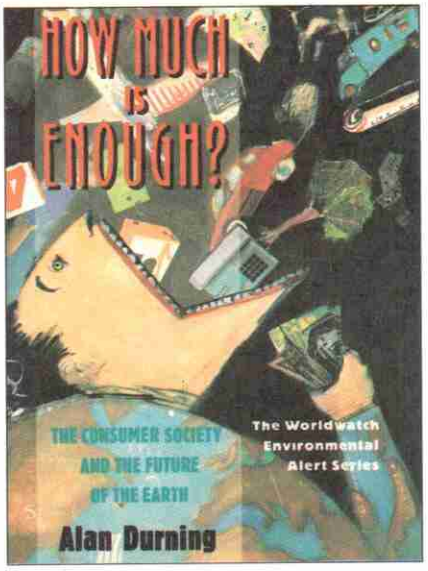
What we need, says Durning, is a return to family and community, to non-material satisfactions like religion and appreciation of art and nature. We need to shift TV out of pushing consumerist values and Western lifestyles, into ends that serve conservation. We need to move away from vast out-of-town shopping malls, to corner shop community stores.

How do we achieve this? Mainly by information and education about environmental damage, which will increase the numbers of people wanting to lead a simple life, and by political pressure at every level to change laws, regulations and technologies.

Durning is a thorough researcher, with a welcome concern for equity as well as for environmental conservation. He writes well, and manages at times to move beyond the journalistic Worldwatch house style into original insight and passion. Most of his detailed prescriptions are sensible.

But I fear the problem will be much harder to deal with than Durning suggests. "There is no reason", he says, why TV cannot be re-oriented, advertising limited to providing information, and cities re-planned. No reason, other than the massive weight of existing buildings and institutions, vested interests and the ideology of the free market.

The consumption problem, too, is more deeply rooted, and harder to deal with,


HOW MUCH IS ENOUGH?
THE CONSUMER SOCIETY AND THE FUTURE OF THE EARTH
The Worldwatch Environmental Alert Series
Alan Durning

than Durning acknowledges. Humans don't consume just to fill their basic needs, nor is conspicuous consumption a recent phenomenon, as he claims. As soon as the first agricultural societies created a surplus over and above survival level, some individuals began to grab that surplus for themselves. Material possessions and excess consumption were used as a sign of social superiority.

There are other ways of doing this. In traditional New Guinea a rare bird feather in your head dress did the trick. We might introduce a system of harmless badges awarded for social and environmental service.

But that would not help with the second obstacle. Most affluent consumption is not merely gratuitous or superfluous. It is not driven just by artificial wants created by TV or advertising, but by people seeing what their friends and neighbours have got, liking what they see, and wanting it for themselves.

Many consumer items fill real – if not essential – needs. Fridges keep foods free of bacteria and reduce the hours needed for shopping. A whole range of purchases from washing machines to drills save labour. Cars offer to increase freedom of movement. Entertainment hardware and distant holidays increase the variety of experience.

We must reduce our impact: but the best place to start is with measures that conserve the environment *and* produce benefits for the individual as well: the plus-plus solutions. These include energy conservation, low-cost soil and water conservation, improved public transport and restrictions on car use in congested cities. They also include the whole range of measures, from women's rights and education to better access to family planning, which reduce population growth rates while improving the quality of life.

But plus-plus solutions will not be enough. Income and population growth will continue to raise the pressure. Is there any chance that consumption will be reined in *voluntarily* on a big enough scale to prevent serious environmental disruption? Will politicians be elected if they stand on a platform of reduced consumption? Even if they do, won't people turn to other parties as soon as measures to reduce consumption start to hurt?

And is it really consumption in itself that we need to limit, or rather environmentally damaging consumption? Can we use benign technologies, and keep the standard of living we have become used to?

No-one has any real answers to these questions. But Durning has made a brave attempt at raising them.

Global Biodiversity is the first in a new series of reports on the state of the world's living resources, which will appear every two years. But this first volume is probably the most comprehensive single volume on the subject in existence, so packed with up-to-date reliable information that every environmental researcher, policy maker, media worker or activist should have it on their shelves.

The coverage is vast, ranging from endangered species to species diversity, through the whole spectrum of life from bacteria to redwoods, and covering ecosystems from tropical forests to savannah, from wetlands to coral reefs.

The book is intended, says the foreword, as a source-book, rather than to be read from end to end. But the temptation to browse is irresistible, and browsing leads, in every direction, to fascinating material.

Paul Harrison

Paul Harrison is the author of *The Third Revolution* (I. B. Tauris, London and St Martin's Press, New York, 1992). ■

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